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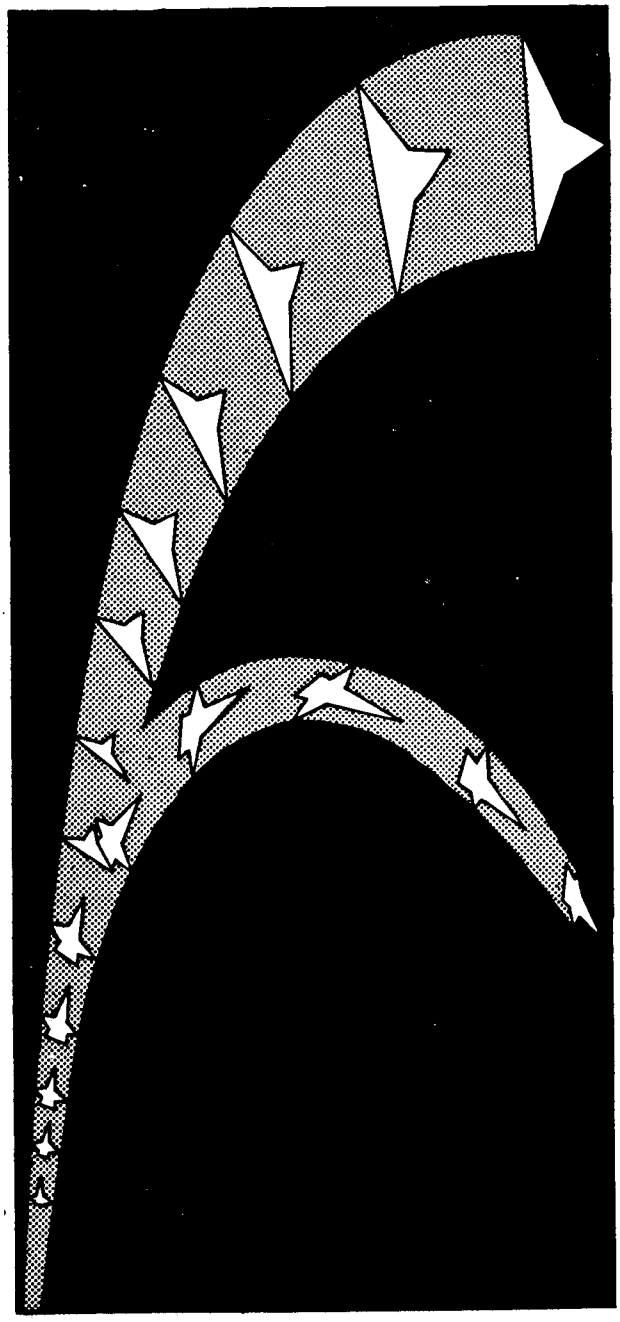

—SPACE SHUTTLE—

HEAT TRANSFER RATE MEASUREMENTS ON NORTH AMERICAN ROCKWELL ORBITER (161B) AT NOMINAL MACH NUMBER OF 8

by

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VFK 50—INCH HYPERSONIC TUNNEL B

ARNOLD ENGINEERING DEVELOPMENT CENTER

SADSAC SPACE SHUTTLE
AEROTHERMODYNAMIC
DATA MANAGEMENT SYSTEM

CONTRACT NAS8-4016
MARSHALL SPACE FLIGHT CENTER

SPACE DIVISION

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SADSAC/SPACE SHUTTLE

WIND TUNNEL TEST DATA REPORT

CONFIGURATION: North American Rockwell Orbiter (161B)

TEST PURPOSE: Heat Transfer Rate Measurement For Reentry of Orbiter Configuration at Nominal Mach Number of 8.

TEST FACILITY: AEDC VKF 50-Inch Hypersonic Tunnel B

TESTING AGENCY: AEDC-MSFC

TEST NO. & DATE: VT 1162-3; May 29, 1971

FACILITY COORDINATOR: Mr. L. L. Trimmer - ARO, Inc.

PROJECT ENGINEER(S): Mr. W. R. Martindale - ARO, Inc.
Mr. R. K. Matthews - ARO, Inc.
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DATA MANAGEMENT SERVICES

LIAISON: NA

DATA OPERATIONS: J. R. Ziler

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CONTRACT NAS 8-4016 AMENDMENT 153 DRL 184-58

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A B S T R A C T

Plotted and tabulated heat transfer data from the thin-skin thermocouple test phase of a joint AEDC-MSFC experimental test program are presented herein. This document designated as Volume III of III presents data representative of the reentry event of the NR Orbiter (161B) alone configuration. Volume I of this series presents heat transfer data applicable to the Ascent Configuration, GD/C B-15B-2 Booster plus NR Orbiter (161B). Volume II presents heat transfer data applicable to the reentry of the B-15B-2 Booster alone configuration.

The model from which these data were generated is a 0.009 scale replica of the North American Orbiter (161B) configuration. The test was conducted in the AEDC VKF 50-Inch Hypersonic Tunnel B at a nominal freestream Mach number of 8, Reynolds number range of 0.8×10^6 to 3.8×10^6 per foot, and angle of attack range of -5 degrees to 50 degrees.

Thermocouple measurements were reduced to heat transfer coefficient ratio (H(TO)/HREF), and these data are presented as plotted variations versus longitudinal, lateral, and vertical local model positions. Tabulated values of these data are presented in the Appendix of this report.

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SUMMARY

A joint AEDC-MSFC experimental test program in the VKF 50-Inch Hypersonic Tunnel B has been conducted to determine detailed heat-transfer distributions on Phase B Space Shuttle configurations. This volume, III of III, presents the NR (161B) Orbiter reentry event data taken during the thin-skin thermocouple phase of these tests.

The configuration investigated was a 0.009 scale replica of the North American Rockwell 9992-161B Delta Wing Orbiter. Data were obtained at a nominal Mach number of 8 and freestream Reynolds number range of 0.83×10^6 to 3.76×10^6 per foot. Angle of attack was varied from -5 degrees to 50 degrees. During the higher angle of attack ($\alpha \geq 30$ deg.) portion of the reentry configuration tests, to obtain turbulent boundary layer flow over as large a portion of the model as possible, carborundum grit was placed on the windward surfaces of the orbiter. The application method consisted of dabbing small dots of Barco Bond® expoxy in about 1 inch intervals over the entire bottom surfaces of the model and then sprinkling the surfaces with No. 46 grit ($\approx$ 0.015-in. diameter). Several pieces of grit adhered to each dot, resulting in model surface irregularities approximately 0.025-in. high. In one case, Run 50, No. 20 grit ($\approx$ 0.043-in. diameter) was placed on the orbiter nose from the nose tip back about one inch for a low angle of attack test. Test runs where this technique was used are noted in Table 2 Test Conditions as - grit-on.

S U M M A R Y
(Continued)

Data generated from this test are presented as plotted variations of heat-transfer coefficient ratio (H(TO)/HREF) versus non-dimensional longitudinal, lateral and vertical local positions. The plotted data are arranged per orbiter component as a function of angle of attack. Tabulated values of the plotted data are located in the Appendix of this document.

CONFIGURATION INVESTIGATED

The orbiter model was a 0.009 scale replica of the North American Rockwell 9992-161B Delta Wing Orbiter furnished by North American Rockwell Corporation. It was machined from 17-4 PH steel to a nominal skin of 0.04 inch.

Configuration details are tabulated in Tables 3 through 8 and a model photograph is presented as Figure 1.

MODEL INSTRUMENTATION

The orbiter model was instrumented with 204 iron-constantan thermocouples of which 193 were used during the orbiter reentry tests. Thermocouple locations are shown graphically in Figure 2 and a tabulation of the locations of the thermocouples used during the orbiter reentry test is given in Table 1.

Thermocouple outputs were recorded on magnetic tape by a Beckman digital data system at the rate of 20 times per second from the start of the model injection cycle until about 5 seconds after the completion of the pitch mode, and the model returned to angle of attack of 0 degrees.

TABLE 1. ORBITER THERMOCOUPLE COORDINATES

SADSAC NO.	TC NUMBER	FUSELAGE X/L	FUSELAGE Y/YMAX
1	1	0.0	+0.0
2	2	.01	-0.0
3	3		-.441
4	4		-1.000
5	5		0.0
6	6	.02	-0.0
7	7	.03	-0.0
8	8		-.303
9	9		-1.000
10	10		0.0
11	11	.04	-0.0
12	12	.05	-0.0
13	13		-.310
14	14		-1.000
15	15		0.0
16	16	.08	-0.0
17	17		-.360
18	18		-1.000
19	19	.10	-0.0
20	20		-.383
21	21		-.817
22	22		-1.000
23	23		.783
24	24		0.0
25	25	.15	-.893
26	26		-1.000
27	27		.664
28	28		0.0
29	29	.20	-0.0
30	30		-.278
31	31		-.466
32	32		-.792
33	33		-1.000
34	34		.888
35	35		0.0
36	36	.21	0.0
37	37	.22	0.0
38	38	.23	0.0
39	39	.24	.486
40	40	.25	0.0
41	41	.27	.465
42	42		.465
43	43		0.0
44	44	.30	-0.0
45	45		-.312
46	46		-.504
47	47		-.857
48	48		-1.000
49	49		.983
50	50		.853
51	51		.433
52	52		.361
53	53		0.0
54	54	.40	-0.0
55	55		-.321
56	56		-.526
57	57		-.951
58	58		-1.000
59	59		1.000
60	60		.906
61	61		.750
62	62		0.0
63	63	.45	-1.000
64	64		1.000
65	65		.990
66	66	.50	-0.0
67	67		-.277
68	68		-.553
69	69		-.830
70	70		-1.000
71	72		1.000
72	73		.886
73	74		.640
74	75		0.0
75	76	.55	-0.0
76	77		-1.000
77	78		1.000
78	79		.935
79	80	.60	-0.0
80	81		-.249
81	82		-.499
82	83		-.748
83	84		-1.000
84	85		1.000
85	86		.907
86	87		0.0
87	88	.65	-0.0
88	89	.70	-0.0
89	90		-.235
90	91		-.469
91	92		-.704
92	93		-.848
93	94		1.000
94	95		.908
95	96		0.0
96	97	.75	-0.0
97	98	.80	-0.0
98	99	.80	-.223
99	100		-.446
100	101		-.669
101	102		-.806
102	103	.85	-0.0
103	104	.90	-0.0
104	105		-.226
105	106		-.452
106	107		-.678
107	108		-.817
108	109		1.000
109	110		.884
110	111		.610
111	112	.95	-0.0
112	114	.99	-0.0
113	115		-.253
114	116		-.507
115	117		-.660
116	118		-.793
117	119		.780
118	120		.305

SADSAC NO.	TC NUMBER	LOWER WING SURFACE X/C	LOWER WING SURFACE Y/S
119	121	0.0	.05
120	122	0.0	.10
121	123	.1	
122	124	.2	
123	126	.6	
124	127	.7	
125	128	.9	
126	134	0.0	.15
127	135	0.0	.25
128	136	.1	
129	137	.2	
130	138	.4	
131	140	.6	
132	142	.9	
133	147	0.0	.45
134	148	.1	.45
135	149	0.0	.50
136	150	.1	
137	151	.2	
138	152	.4	
139	154	.6	
140	156	.8	
141	157	.9	
142	163	0.0	.55
143	164	.1	.55
144	165	0.0	.60
145	166	.1	.60
146	167	0.0	.65
147	168	.1	.65
148	169	0.0	.70
149	170	.1	.70
150	171	0.0	.75
151	172	.1	
152	173	.2	
153	175	.4	
154	176	.7	
155	178	.8	
156	183	0.0	.90
157	184	.2	
158	185	.6	
159	186	.8	

SADSAC NO.	TC NUMBER	UPPER WING SURFACE X/C	UPPER WING SURFACE Y/S
160	129	.1	.10
161	130	.2	
162	131	.4	
163	132	.7	
164	133	.9	
165	143	.1	.25
166	144	.2	

TABLE 1.(Continued)
ORBITER THERMOCOUPLE COORDINATES

SADSAC NO.	TC NUMBER	UPPER WING SURFACE X/C	Y/S
167	145	.4	.25
168	146	.9	↓
169	158	.1	.50
170	159	.2	|
171	160	.4	|
172	161	.8	|
173	162	.9	↓
174	179	.1	.75
175	180	.2	|
176	181	.4	|
177	182	.8	↓
		VERTICAL STABILIZER X/C	Z/S
178	187	0.0	.10
179	188	.1	|
180	189	.4	|
181	191	.8	↓
182	192	0.0	.25
183	193	.1	|
184	194	.4	|
185	195	.8	↓
186	196	0.0	.50
187	197	.1	|
188	198	.4	|
189	200	.8	↓
190	201	0.0	.75
191	202	.1	|
192	203	.4	|
193	204	.8	↓

TEST FACILITY DESCRIPTION

Tunnel B is a continuous, closed-circuit, variable density wind tunnel with an axisymmetric contoured nozzle and a 50-in.-diameter test section. The tunnel can be operated at a nominal Mach number of 6 or 8 at stagnation pressures from 20 to 300 and 50 to 900 psia, respectively, at stagnation temperatures up to 1350°R. The model may be injected into the tunnel for a test run and then retracted for model cooling or model changes without interrupting the tunnel flow.

TEST CONDITIONS

Nominal test conditions are summarized in Table 2. Specific test conditions for the individual runs are presented at the top of the tabulation sheets located in the Appendix of this document.

TABLE 2

TEST CONDITIONS

TEST TITLE: AEDC-MSFC Phase B Heating Study - Thin-Skin Thermocouple Phase

TEST NUMBER: VT1162 **TEST FACILITY:** AEDC Tunnel B

TEST DATE: May 26-29, 1971 **TEST ENGINEER:** W. R. Martindale & R. K. Matthews

Run No.	Model Configuration Identification	δ_c	δ_e	Model Scale	Free Stream Mach Number	Total Pressure (psia)	Total Temp. (°R)	$\frac{T_{aw}*}{T_{total}}$	$\frac{RNX10^6}{Ft}$	Phase Change Temp. (°F)	Booster-Orbiter Spacing (in.) XD	ZD	GRIT	Model Position (degrees) β	ϕ_M	α
1	Booster + Orbiter	0	0	0.009	8.00	857	1339	1.00	3.75	NA	2.22	.234	Off	0	0	0
2	↓	↓	↓	↓	↓	858	1347	↓	3.72	↓	↓	↓	↓	↓	↓	-5
3	↓	↓	↓	↓	↓	856	1346	↓	3.72	↓	↓	↓	↓	↓	↓	5
4	↓	↓	↓	↓	↓	858	1341	↓	3.75	↓	1.72	↓	↓	↓	↓	0
5	↓	↓	↓	↓	↓	859	1347	↓	3.73	↓	2.72	↓	↓	↓	↓	↓
6	↓	↓	↓	↓	↓	858	1338	↓	3.76	↓	2.22	.118	↓	↓	↓	↓
7	↓	↓	↓	↓	↓	859	1346	↓	3.73	↓	↓	.318	↓	↓	↓	↓
8	↓	↓	↓	↓	7.93	149	1249	↓	0.74	↓	↓	.234	↓	↓	↓	↓
9	↓	↓	↓	↓	↓	148	1234	↓	0.75	↓	↓	↓	↓	↓	↓	-5
10	↓	↓	↓	↓	↓	151	1233	↓	0.77	↓	↓	↓	↓	↓	↓	5
11	↓	↓	↓	↓	8.00	857	1342	↓	3.74	↓	↓	↓	↓	-5	↓	0
12	Booster	↓	↓	↓	↓	861	1342	↓	3.76	↓	-	-	↓	0	↓	↓
13	↓	↓	↓	↓	↓	860	1341	↓	3.75	↓	-	-	↓	↓	↓	-5

** X axis parallel to stream (+downstream, -upstream)
Y axis (+right, -left, as viewed from the rear)
Z axis (+up, -down)

* T_{aw} = adiabatic wall temperature

TABLE 2 - Continued

TEST CONDITIONS

TEST TITLE: AEDC-MSFC Phase B Heating Study - Thin-Skin Thermocouple Phase

TEST NUMBER: VT1162 **TEST FACILITY:** AEDC Tunnel B

TEST DATE: May 26-29, 1971 **TEST ENGINEER:** W. R. Martindale & R. K. Matthews

Run No.	Model Configuration Identification			Model Scale	Free Stream Mach Number	Total Pressure (psia)	Total Temp. (°R)	$\frac{T_{aw}*}{T_{total}}$	$\frac{RNX10^6}{Ft}$	Phase Change Temp. (°F)	Booster-Orbiter Spacing (in.)			Model Position (degrees)		
		δ_c	δ_e								XD	ZD	GRIT	β	ϕ_M	α
14	Booster	0	0	0.009	8.00	856	1347	1.00	3.72	NA	-	-	Off	0	0	5
15	↓			↓	7.93	149	1225	↓	0.76	↓	↓	↓	↓	↓	↓	0
16					↓	150	1223		0.77							-5
17						149	1219		0.77							5
18		60			8.00	857	1353		3.69							60
19		50			↓	855	1340		3.74							50
20		40				857	1338		3.76				↓			40
21		40				856	1342		3.73				On			40
22		60				860	1343		3.75				On			60
23		10				856	1344		3.73				Off			10
24		20				856	1342		3.73							20
25		30	↓			857	1346		3.72							30
26	↓	30	-15	↓	↓	857	1342	↓	3.74	↓	↓	↓	↓	↓	↓	↓

** X axis parallel to stream (+downstream, -upstream)
Y axis (+right, -left, as viewed from the rear)
Z axis (+up, -down)

* T_{aw} = adiabatic wall temperature

TABLE 2 - Continued

TEST CONDITIONS

TEST TITLE: AEDC-MSFC Phase B Heating Study - Thin-Skin Thermocouple Phase

TEST NUMBER: VT1162 **TEST FACILITY:** AEDC Tunnel B

TEST DATE: May 26-29, 1971 **TEST ENGINEER:** W. R. Martindale & R. K. Matthews

Run No.	Model Configuration Identification	δ_c	δ_e	Model Scale	Free Stream Mach Number	Total Pressure (psia)	Total Temp. (^oR)	$\frac{T_{aw}*}{T_{total}}$	$\frac{RNX10^6}{Ft}$	Phase Change Temp. (^oF)	Booster-Orbiter Spacing (in.) XD	ZD	GRIT	Model Position (degrees) β	ϕ_r	α
27	Booster	30	15	0.009	8.00	859	1342	1.00	3.74	NA	-	-	Off	0	0	30
28	Booster	0	0			858	1342		3.74				↓			0
29	Orbiter	-				859	1339		3.76				On			50
30						857	1337		3.76				On			40
31						857	1343		3.74				On			30
32						856	1340		3.74				Off			30
33						856	1343		3.73							40
34						858	1347		3.72							50
35						555	1305		2.52							50
36						553	1311		2.50							40
37						554	1311		2.50							30
38						554	1308		2.51							20
39	↓	↓	↓	↓	↓	553	1307	↓	2.51	↓	↓	↓	↓	↓	↓	10

** X axis parallel to stream (+downstream, -upstream)
Y axis (+right, -left, as viewed from the rear)
Z axis (+up, -down)

* T_{aw} = adiabatic wall temperature

TABLE 2 - Concluded

TEST CONDITIONS

TEST TITLE: AEDC-MSFC Phase B Heating Study - Thin-Skin Thermocouple Phase

TEST NUMBER: VT1162 **TEST FACILITY:** AEDC Tunnel B

TEST DATE: May 26-29, 1971 **TEST ENGINEER:** W. R. Martindale & R. K. Matthews

Run No.	Model Configuration Identification			Model Scale	Free Stream Mach Number	Total Pressure (psia)	Total Temp. (^{o}R)	$\frac{T_{aw}*}{T_{total}}$	RNX10^{6} Ft	Phase Change Temp. (^{o}F)	Booster-Orbiter Spacing (in.)			Model Position (degrees)		
		δ_c	δ_e								XD	ZD	GRIT	β	ϕ_N	α
40	Orbiter	-	0	0.009	7.94	165	1254	1.00	0.82	NA	-	-	Off	0	0	10
41						165	1237		0.83							20
42						166	1228		0.84							30
43						167	1232		0.85							5
44						167	1237		0.84							0
45						165	1241		0.83							-5
46					8.00	856	1324		3.81							-5
47						863	1335		3.79							0
48						861	1344		3.75							20
49						856	1342		3.74							10
50						858	1344		3.74				*** On			10
51			-10			858	1346		3.73				Off			30

** X axis parallel to stream (+downstream, -upstream)
Y axis (+right, -left, as viewed from the rear)
Z axis (+up, -down)

* T_{aw} = adiabatic wall temperature

***Nose only

DATA REDUCTION

The reduction of thin-skin thermocouple data normally involves only the calorimetric heat balance which in coefficient form is:

$$h = wb\ c_p \left(\frac{dT_w/dt}{T_o - T_w} \right) \tag{1}$$

Radiation and conduction losses are neglected in this heat balance and data reduction simply requires evaluation of dT_w/dt from the temperature-time data and determination of model material properties. For the present tests radiation effects were negligible; however, conduction effects were significant in several regions of the models. To permit identification of these regions and improve evaluation of the data the following procedure was used.

Separation of variables and integration of Equation (1) assuming constant w, b, c_p, and T_o yields

$$\frac{h}{wb\ c_p}\ (t - t_i) = \ell n \left(\frac{T_o - T_{wi}}{T_o - T_w} \right) \tag{2}$$

Differentiation of Equation (2) with respect to time gives

$$\frac{h}{wb\ c_p} = \frac{d}{dt}\ \left[\ell n\ \left(\frac{T_o - T_{wi}}{T_o - T_w} \right) \right] \tag{3}$$

Since the left side of Equation (3) is a constant, plotting $\ell n \left(\frac{T_o - T_{wi}}{T_o - T_w} \right)$ versus time will give a straight line if <u>conduction is negligible</u>. Thus, deviation from a straight line can be interpreted as conduction effects.

The data were evaluated in this manner and generally a reasonably linear portion of the curve could be found for all thermocouples. For high heating rates, such as experienced in the nose, leading edge, and interference regions, the linear portion was quite short. A linear least squares curve fit of $\ell n \left(\frac{T_o - T_{wi}}{T_o - T_w}\right)$ versus time was applied to the data beginning at the time which the model reached uniform flow and extending for a time span which was a function of the heating rate, shown below:

Heating Rate, R/sec	Time Span of Data Used, sec.	Number of Data Points Used
$16 \leq dT_w/dt$	0.2	5
$4 \leq dT_w/dt < 16$	0.4	9
$2 \leq dT_w/dt < 4$	0.6	13
$dT_w/dt < 2$	1.0	21

In general, the above time spans were adequate to keep the evaluation of the right side of Equation (3) within the linear region. Strictly, the value of c_p is not constant as assumed and the relation

$$c_p = 0.0608 + 1.295 \times 10^{-4} T_w - 6.35 \times 10^{-8} T_w^2 \qquad (4)$$

was used with the value of T_w at the midpoint of the curve fit. The maximum variation of c_p over any curve fit was less than one percent; thus the assumption of constancy was not grossly violated. A constant 485 LB_m/ft^3 was used for w and measured values of b for each thermocouple were used.

SUMMARY DATA PLOT INDEX

COMPONENT IDENTIFICATION	PLOTTING SCHEDULE	CONDITIONS VARYING	PAGES
Fuselage	A	Bottom & Top Centerline	31-52
Fuselage	B	X/L	53-96
Upper Wing Surface	C	Elevon Deflection Angle and Y/S	97-118
Lower Wing Surface	C	Elevon Deflection Angle and Y/S	119-140
Vertical Stabilizer	C	Z/S	141-161

SCHEDULE A:

H(TO)/HREF vs. X/L

SCHEDULE B:

H(TO)/HREF vs. Y/YMAX

SCHEDULE C:

H(TO)/HREF vs. X/C

Note: Angle of attack range -5 degrees to 50 degrees.
Data measured at selected angles of attack
(10, 20, 40, and 50 degrees) for grit-on configuration.

FIGURES

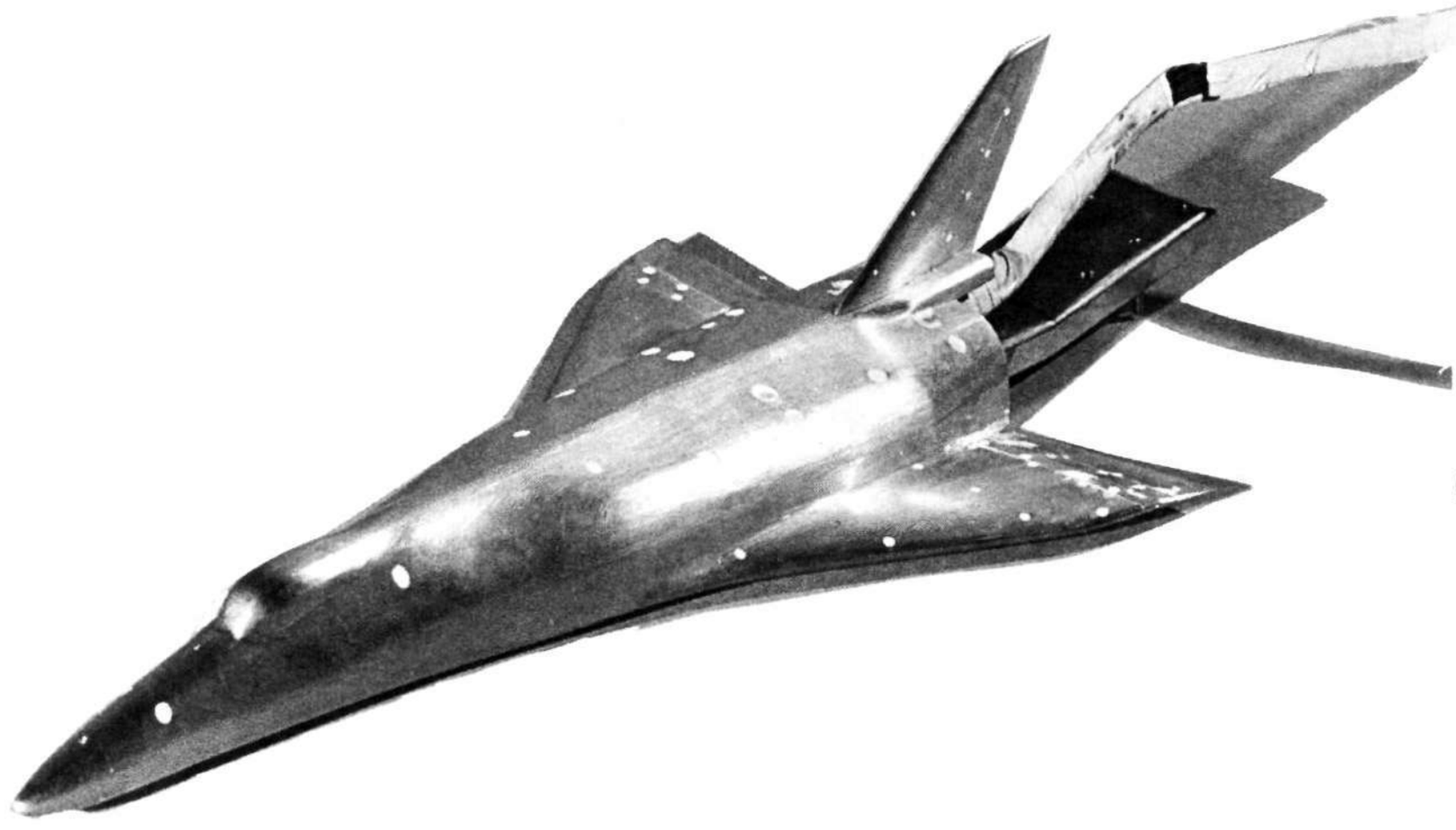

Figure 1 Orbiter Model Photograph

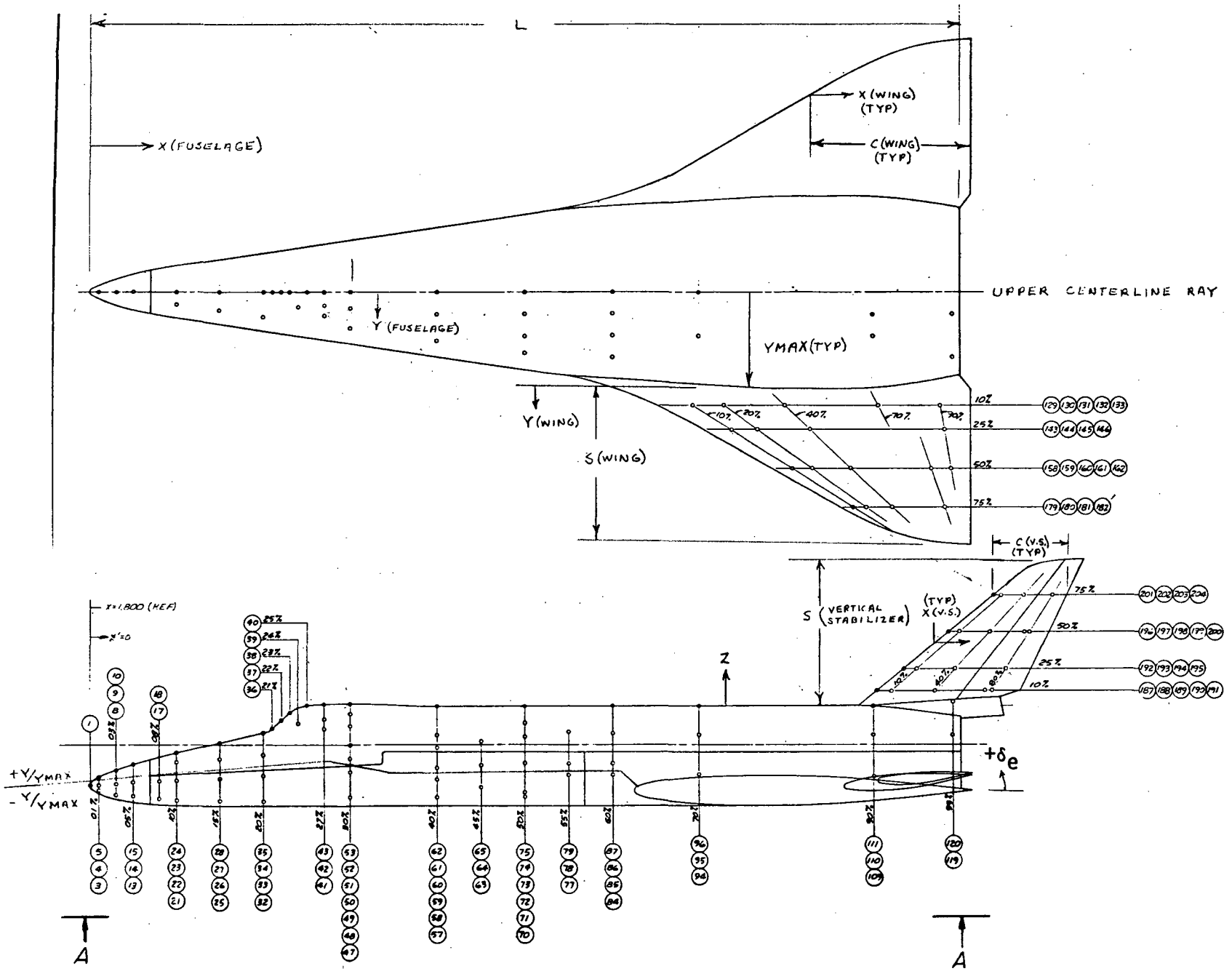

Figure 2 Orbiter Thermocouple Locations

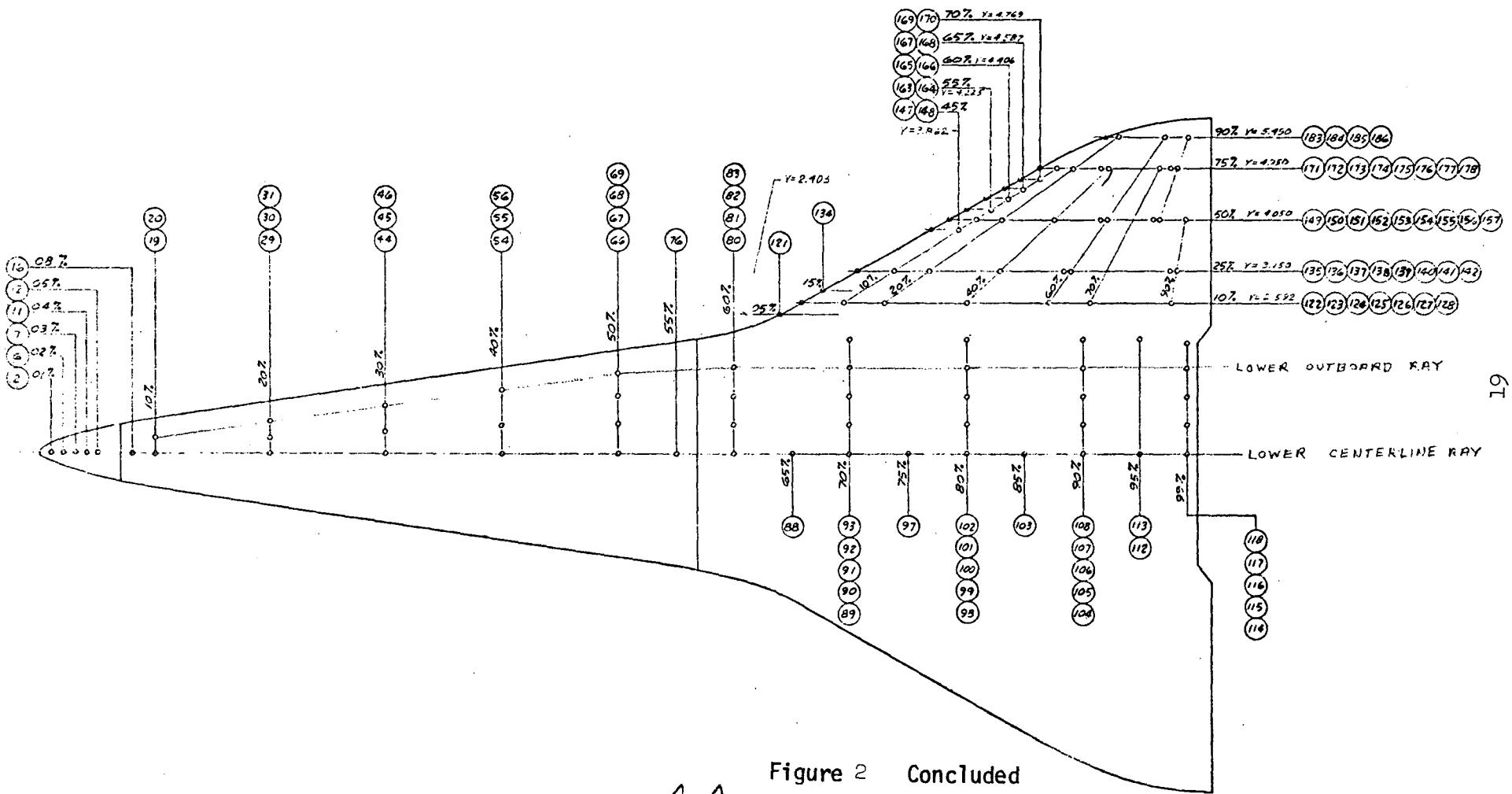

Figure 2 Concluded

MODEL COMPONENT DESCRIPTION SHEETS

Table 3 Orbiter Fuselage Details

MODEL COMPONENT: BODY - B6

GENERAL DESCRIPTION: Basic delta wing fuselage as per NR lines drawing 9992-161B. Fuselage reference plane is located at water plane 400.00 in.

Model Scale = 0.009

DRAWING NUMBER: Lines Drawing 9992-161B
ELLCO Engineering EE5424-1106-2 thru -5

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Length	2223.00	20.007
Max. Width	495.80	4.462
Max. Depth	263.00	2.367
Fineness Ratio	6.019	6.019
Area		
Max. Cross-Sectional	743.95	0.06026
Planform	DNA	DNA
Wetted	DNA	DNA
Base	DNA	DNA

Table 4 Orbiter Wing Details

GENERAL DESCRIPTION: Delta wing with -5° twist and rounded wing tips. Wing blended into body. Follows NR lines 9992-161B. Used with Body B6.

Model Scale = 0.009

DRAWING NUMBER: Ellco Engineering EE5424-1106-4, -6, -23, -24, -25

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area, ft^2		
Planform	6511.00	0.52736
Wetted	-	-
Span (equivalent), in.	1272.38	11.451
Aspect Ratio	1.714	1.714
Rate of Taper	1.719	1.719
Taper Ratio	0.144	0.144
Dihedral Angle, degrees	7.000	7.000
Incidence Angle, degrees	0.000	0.000
Aerodynamic Twist, degrees (about T.E.)	-5.000	-5.000
Incidence, Root (B.P. 247.90)	0.000	0.000
Incidence, Tip (B.P. 557.70)	-5.000	-5.000
Sweep Back Angles, degrees		
Leading Edge	59.808	59.808
Trailing Edge	0.000	0.000
0.25 Element Line	52.197	52.197
Chords: in.		
Root (Wing Sta. 0.0)	1287.70	11.589
Tip, (equivalent)(W.S. 640.97)	186.00	1.674
MAC (W.S. 240.62)	874.10	7.867
Fus. Sta. of .25 MAC	1793.32	16.140
W.P. of .25 MAC	280.73	2.527
B.L. of .25 MAC	238.83	2.149
Airfoil Section		
Root (W.S. 249.75)	NACA 0009-64	
Tip (W.S. 561.85)	NACA 0012-64	
EXPOSED DATA		
Area, ft^2	3023.00	0.24482
Span, (equivalent), in.	810.61	7.296
Aspect Ratio	1.408	1.493
Taper Ratio	0.209	0.209
Chords: in.		
Root (Equiv.)(W.S. 232.62)	887.85	7.991
Tip (Equiv.)(W.S. 640.97)	186.00	1.674
MAC (W.S. 392.31)	613.34	5.520
Fus. Sta. of .25 MAC	1900.65	17.000
W.P. of .25 MAC	299.22	2.693
B.L. of .25 MAC	389.39	3.504
LEADING EDGE CUT		
Planform Area, ft^2	62.29	0.00505
L.E. Intersects Fus. [illegible] Sta., in.	1275.00	11.475
L.E. Intersects Wing L.E. Sta., in.	1749.00	15.714

Table 5 Orbiter Elevon Details

MODEL COMPONENT: Elevon - E_{11} (Data for one of two sides)

GENERAL DESCRIPTION: Constant chord elevon located on Delta Wing - W_{21}

Model Scale = 0.009

DRAWING NUMBER: Ellco Engineering EE5424-1106-23, -24, -25

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area (true), ft^2	423.09	0.03427
Span (equivalent), in.	417.30	3.756
Inb'd equivalent chord, in. (W.S. 237.48)	146.00	1.314
Outb'd equivalent chord, in. (W.S. 654.78)	146.00	1.314
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.166	0.166
At Outb'd equiv. chord	0.900	0.900
Sweep Back Angles, degrees		
Leading Edge	0.000	0.000
Tailing Edge	0.000	0.000
Hingeline	0.000	0.000
Area Moment (Normal to hinge line), ft^3 (Product of area and mean chord)	5144.00	0.00375

Table 6 Orbital Maneuvering System Shroud Details

MODEL COMPONENT: Orbital Maneuvering System Shroud - Z2

GENERAL DESCRIPTION: Fairing over orbital manuevering system. Located on aft upper fuselage mold line.

Model Scale = 0.009

DRAWING NUMBER: Elico Engineering EE5424-1106

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Length (along upper surface), in.	359.31	3.234
Sta. of Leading Edge, in.	2163.33	19.470
Sta. of Trailing Edge, in.	2523.56	22.712
Pitch Angle (T.E. Up), deg.	3.181	3.181
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

Table 7 Orbiter Tail Details

MODEL COMPONENT: Vertical Tail - V27

GENERAL DESCRIPTION: Centerline vertical tail on delta wing configuration. The total data includes the void area listed below. Used with Body-B6. Follows NR lines 9992-161B. Model Scale = 0.009

DRAWING NUMBER: Ellco Engineering EE5424-1106-7, -8, -11, -12

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area, ft^2		
Planform	626.03	0.05071
*Void (included above)	1.99	0.00016
Span (equivalent), in.	361.06	3.250
Aspect Ratio	1.446	1.446
Rate of Taper	0.718	0.718
Taper Ratio	0.316	0.316
Dihedral Angle, degrees	-	-
Incidence Angle, degrees	-	-
Aerodynamic Twist, degrees	-	-
Toe-In Angle	0.000	0.000
Cant Angle	0.000	0.000
Sweep Back Angles, degrees		
Leading Edge	50.003	50.003
Trailing Edge	25.352	25.352
0.25 Element Line	45.352	45.352
Chords: in.		
Root(W.P 511.62)	379.31	3.414
Tip, (equivalent)(W.P. 872.67)	120.05	1.080
MAC (W.P. 660.90)	272.11	2.449
Fus. Sta. of .25 MAC	2422.61	21.803
W.P. of .25 MAC	660.90	5.948
B.L. of .25 MAC	0.00	0.000
Airfoil Section		
(W.P. 500.44)	NACA 0012-64	
(W.P. 878.00)	NACA 0009-64	
EXPOSED DATA		
Area		
Span, (equivalent)		
Aspect Ratio		
Taper Ratio		
Chords		
Root		
Tip		
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		

* This area is the void area located at the lower aft portion of the surface.

Table 8 Orbiter Drag Brake Details

MODEL COMPONENT: Drag Brake - J4 (Data for one of two sides)

GENERAL DESCRIPTION: Drag Brake - J4 is the deflectable side panels of delta wing vertical tail V27 hinged at the 60% element line and extending to the trailing edge.

Model Scale = 0.009

DRAWING NUMBER: Ellco Engineering EE5424-1106-11, -12

(All dimensions are in the drag brake reference plane)

DIMENSIONS:

	FULL-SCALE	MODEL SCALE
Area, ft^2	242.39	0.01963
Span (equivalent), in.	355.61	3.201
Inb'd equivalent chord, in. (W.P. 520.18)	149.22	1.343
Outb'd equivalent chord, in. (W.P. 875.79)	47.08	0.424
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	-	-
At Outb'd equiv. chord	-	-
Sweep Back Angles, degrees		
Leading Edge	37.273	37.273
Tailing Edge	25.352	25.352
Hingeline	37.273	37.273
Area Moment (Normal to hinge line), ft^3 (Produce of area and mean chord)	1921.27	0.00140
Buttock Plane of Hingeline, in.	3.44	0.031

NOMENCLATURE

SYMBOL		DEFINITION
TEXT	DATA PRINTOUT	
b		Skin thickness, ft.
c	C	Local chord length, in.
c_p		Specific heat, BTU/lb_m-^oR
dT_w/dt	DTWDT	Derivative of the model skin temperature with respect to time, ^oR/sec
h	H(TO)	Heat transfer coefficient based on T_o, BTU/ft^2-sec-^oR
	H(9TO)	Heat transfer coefficient based on 0.9 T_o, BTU/ft^2-sec-^oR
	H(.85TO)	Heat transfer coefficient based on 0.85 T_o, BTU/ft^2-sec-^oR
h_{ref}	HREF	Theoretical stagnation point heat transfer coefficient for a 0.009-foot (1 scale foot) radius sphere calculated from Fay-Riddell theory using a wall temperature of 560 R, BTU/ft^2-sec-^oR
L	L	Fuselage length (See Fig. 2)
	MACH	Free-stream Mach number
	MU-INF	Free-stream viscosity, lb/sec-ft^2
	P-INF	Free-stream pressure, psia
	PO	Tunnel-stilling chamber pressure, psia

NOMENCLATURE
(Continued)

SYMBOL		DEFINITION
TEXT	DATA PRINTOUT	
	Q-DOT	Heat transfer rate, BTU/ft^2-sec
	Q-INF	Free-stream dynamic pressure, psia
	RE/FT	Free-stream unit Reynolds number ft^{-1}
	RHO-INF	Free-stream density, slugs/ft^3
	ROLL-MODEL	Model roll angle, deg.
S	S	Semispan, wing, vertical stabilizer (see Figs. 2 and 2 continued)
	ST-FR	Theoretical stagnation point Stanton number for a 0.009-foot (1 scale foot) radius sphere calculated from Fay-Riddell theory using a wall temperature of 560°R
t		Time, sec.
	T-INF	Free-stream temperature, °R
T_o	TO	Tunnel stilling chamber temperature, °R
T_w	TW	Model skin temperature, °R
	V-INF	Free-stream velocity, ft/sec
w		Model skin density, lb_m/ft^3
X	X	Axial coordinate (see Figs. 2 and 2 continued)
XD		Axial distance from the orbiter nose to the booster nose, in.

NOMENCLATURE
(Continued)

SYMBOL		DEFINITION
TEXT	DATA PRINTOUT	
Y	Y	Lateral coordinate (see Figs. 2 and 2 continued)
	YAW	Model yaw angle (equal to -), deg.
	YMAX	Local maximum fuselage width, in.
Z	Z	Vertical coordinate (see Fig. 2)
ZD		Vertical distance from the top of the booster to the bottom of the orbiter, in.
α	ALPHA-MODEL	Model angle of attack, deg.
	ALPHA-PREBEND	Sting prebend angle, deg.
	ALPHA-SECTOR	Tunnel sector angle, deg.
β		Sideslip angle, deg.
ϕ *	PHI	Orientation angle on the booster (see Fig. 2), deg.
ϕ_M		Model roll angle, deg.
δ_C *		Canard deflection angle (see Fig. 2), deg.
δ_e		Elevon deflection angle (see Fig. 2), deg.
SUBSCRIPT		
i		Initial conditions

* Not applicable to this configuration.

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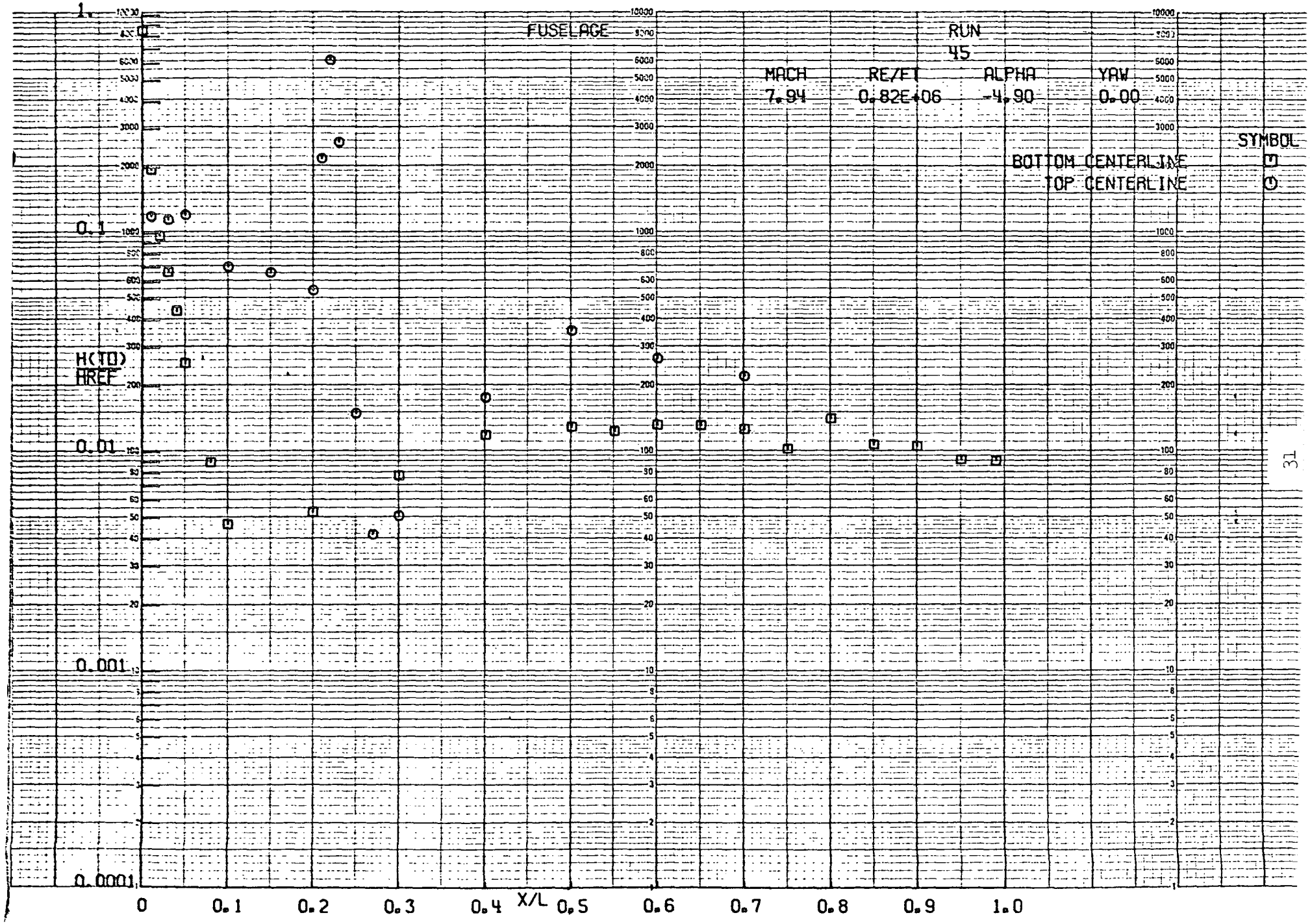
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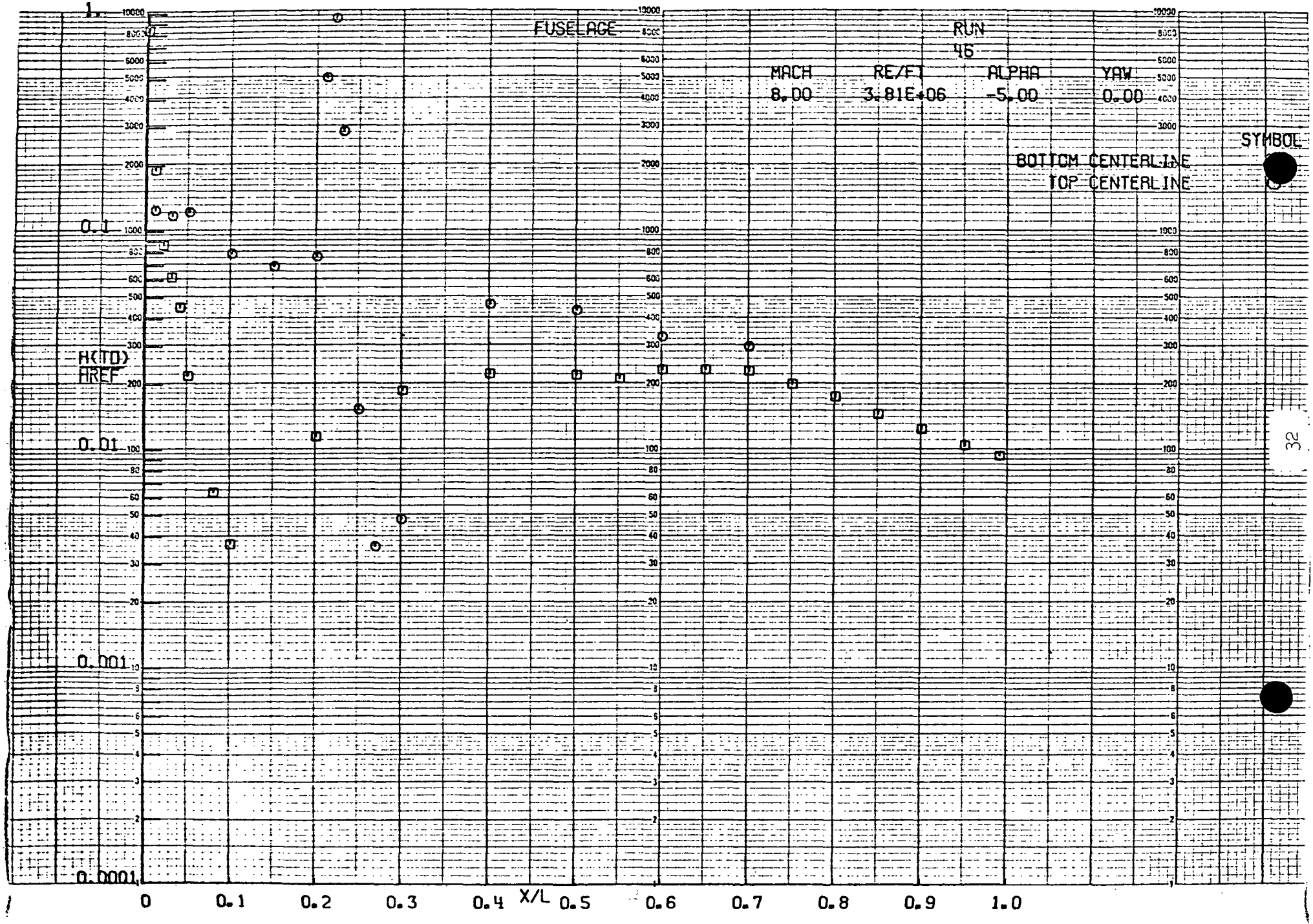
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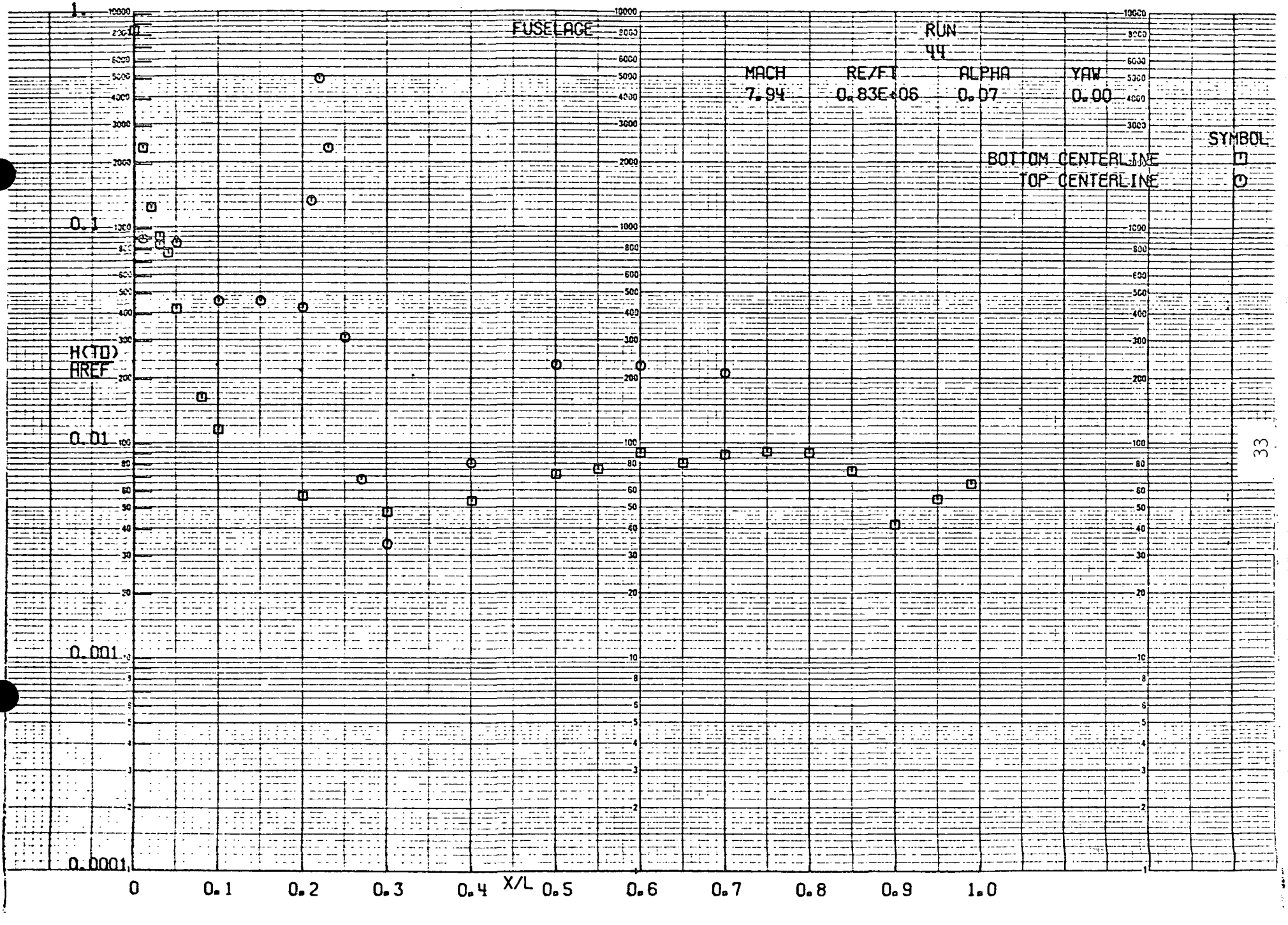
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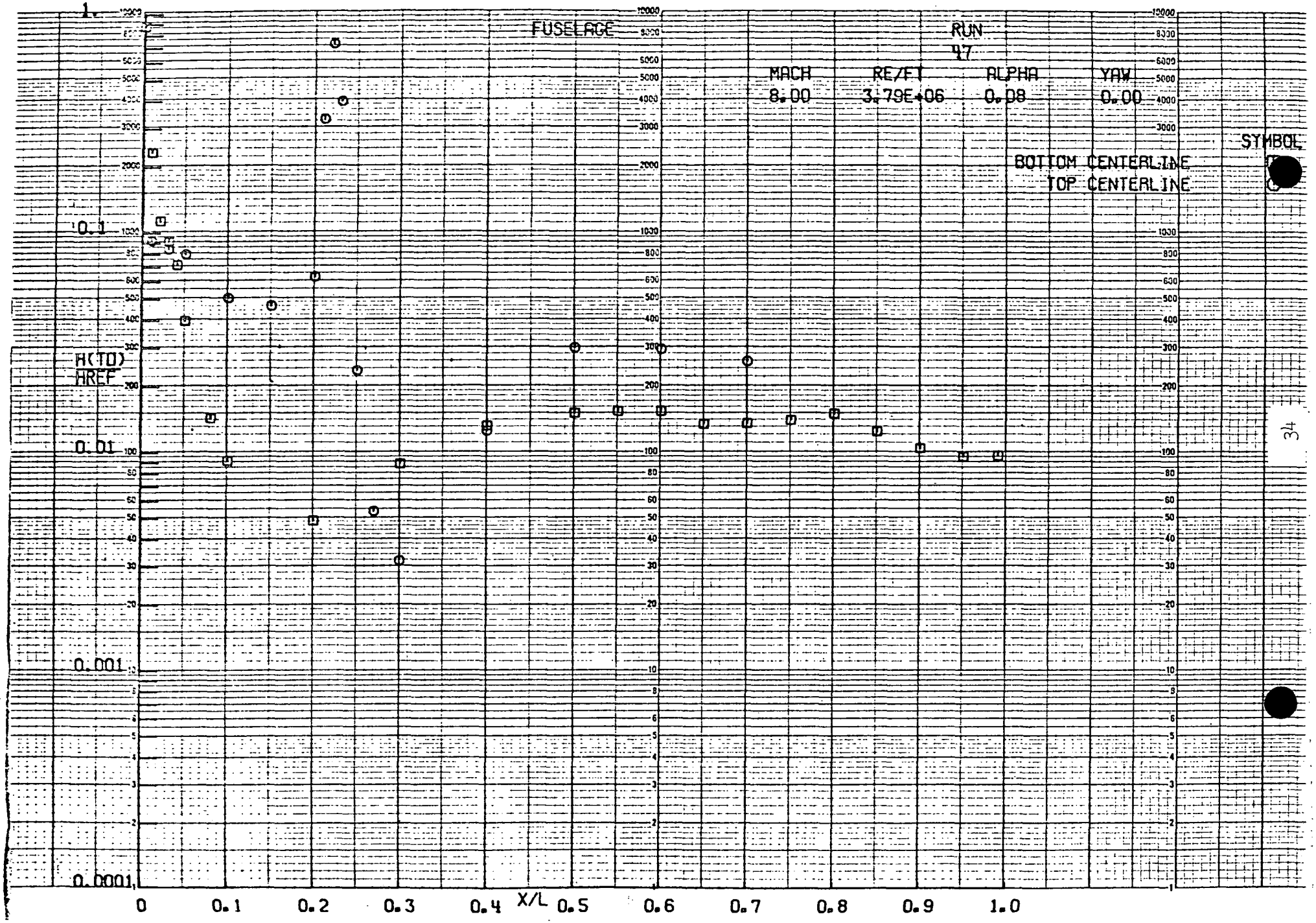
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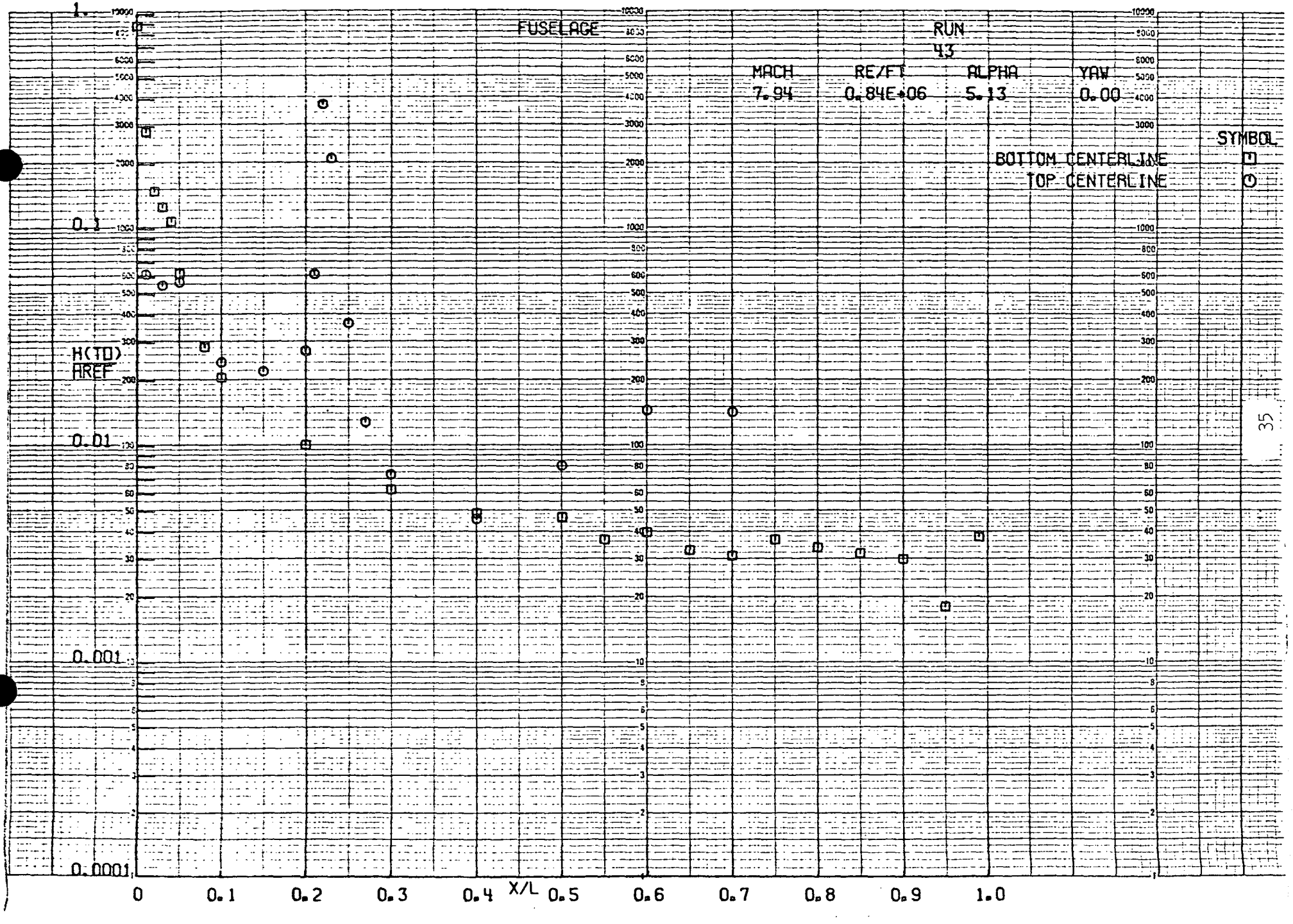
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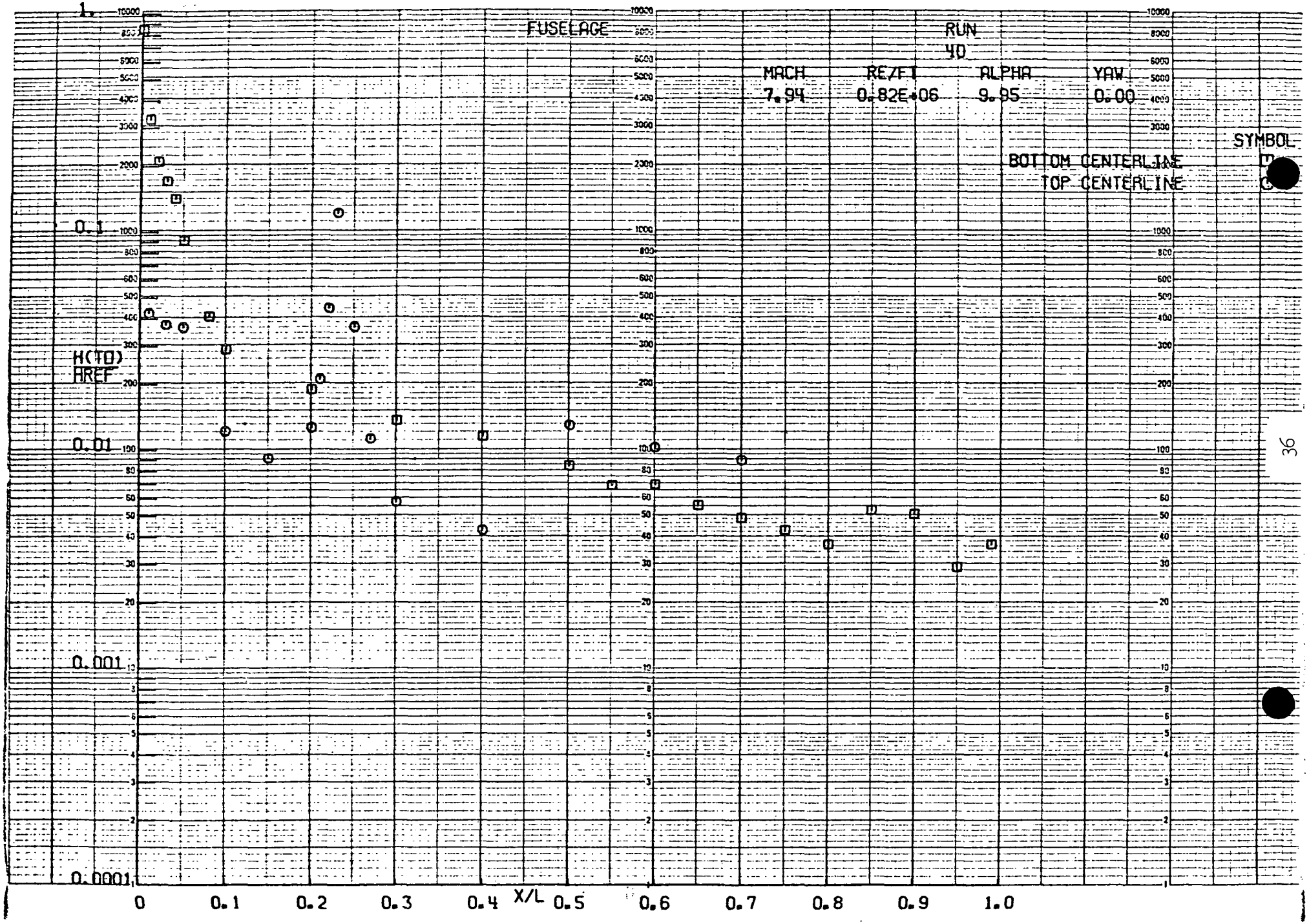
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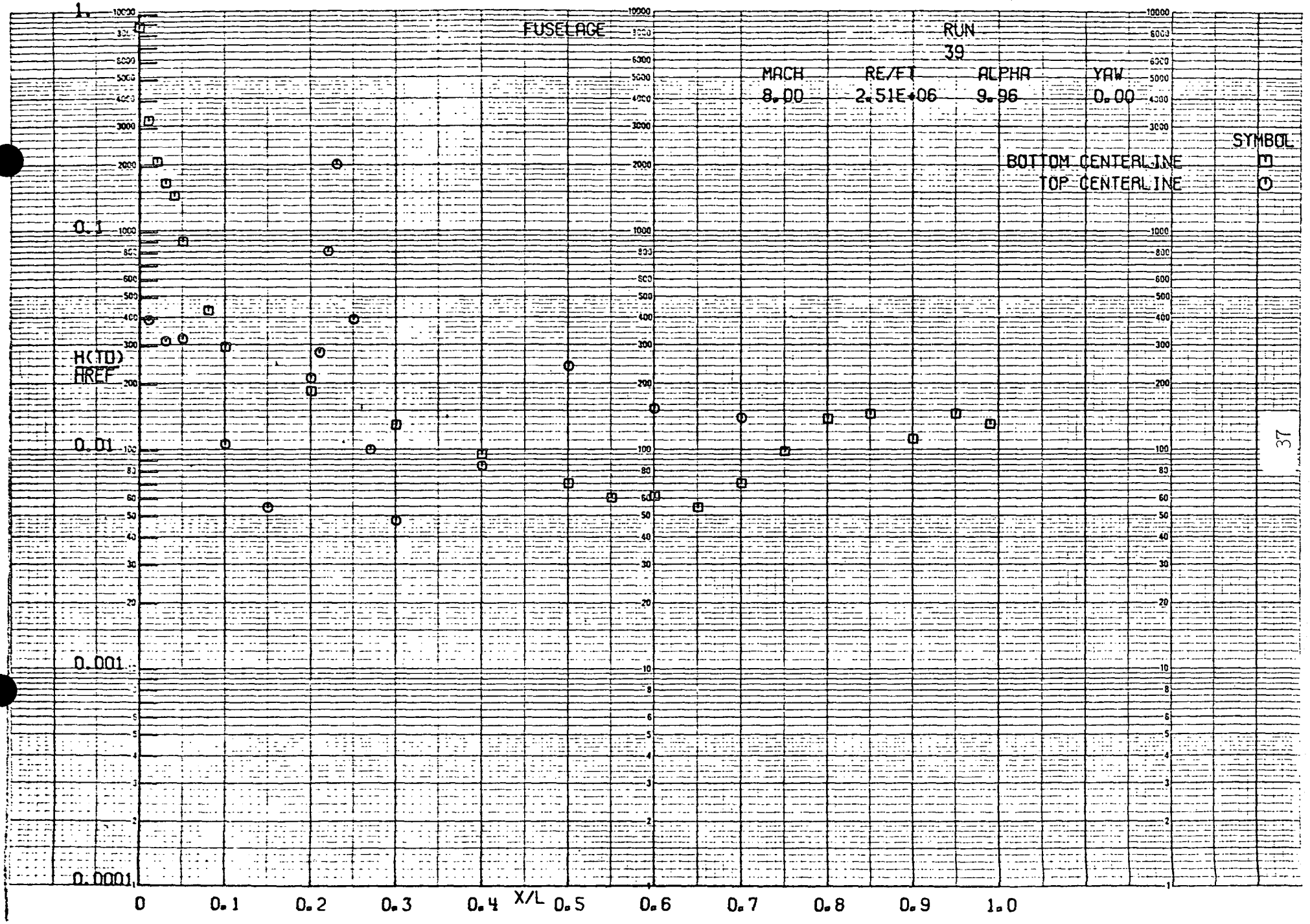
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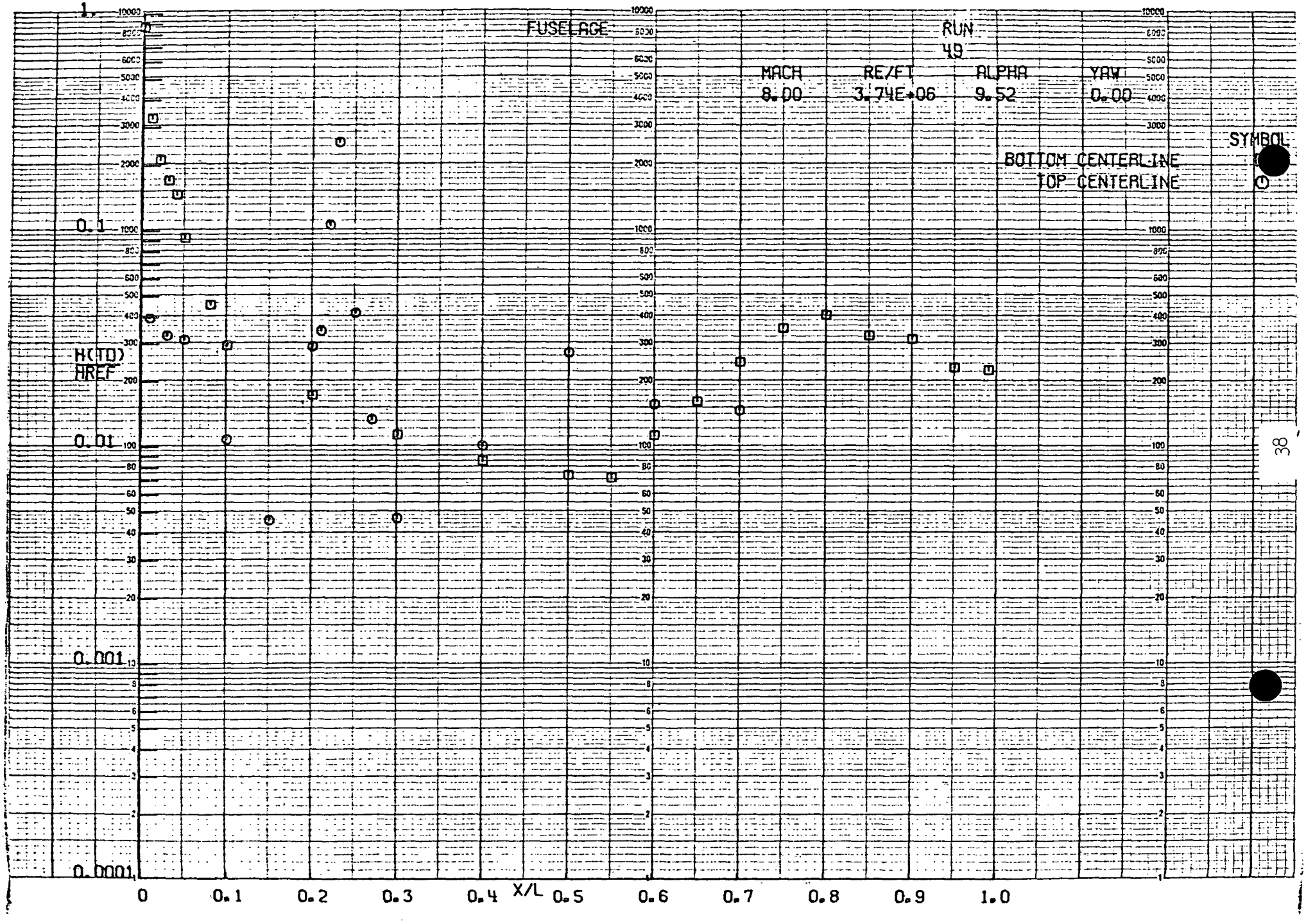
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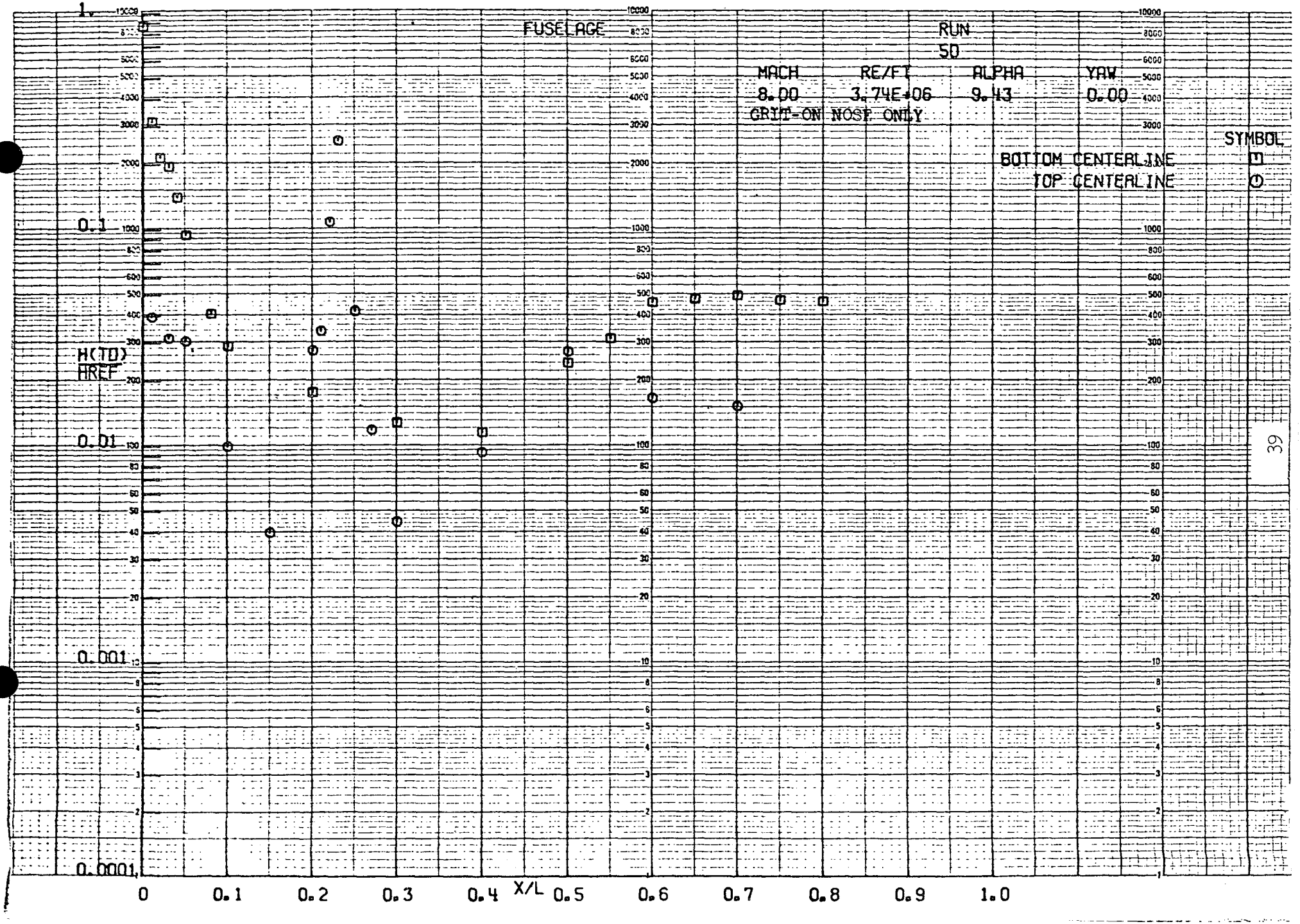
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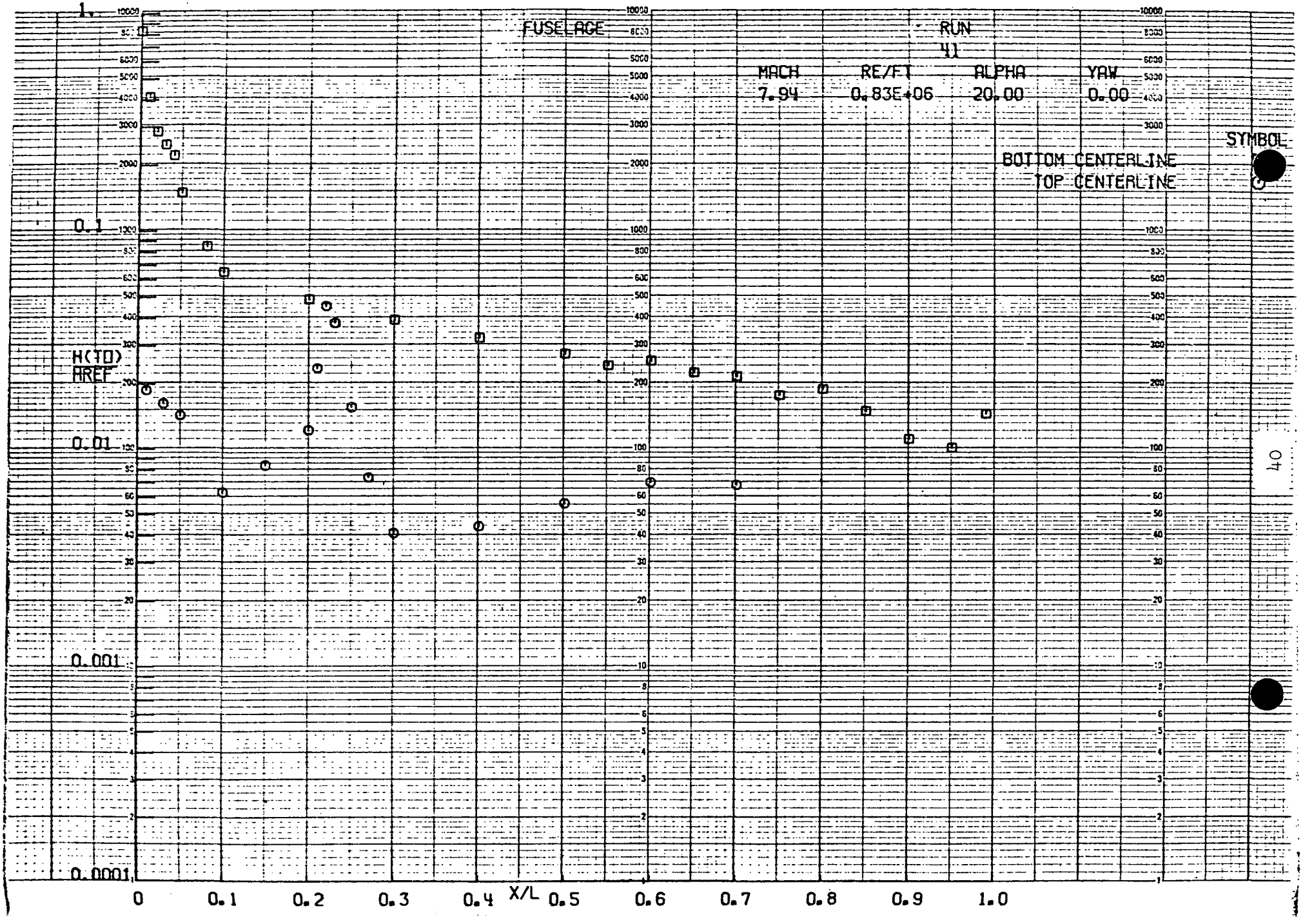
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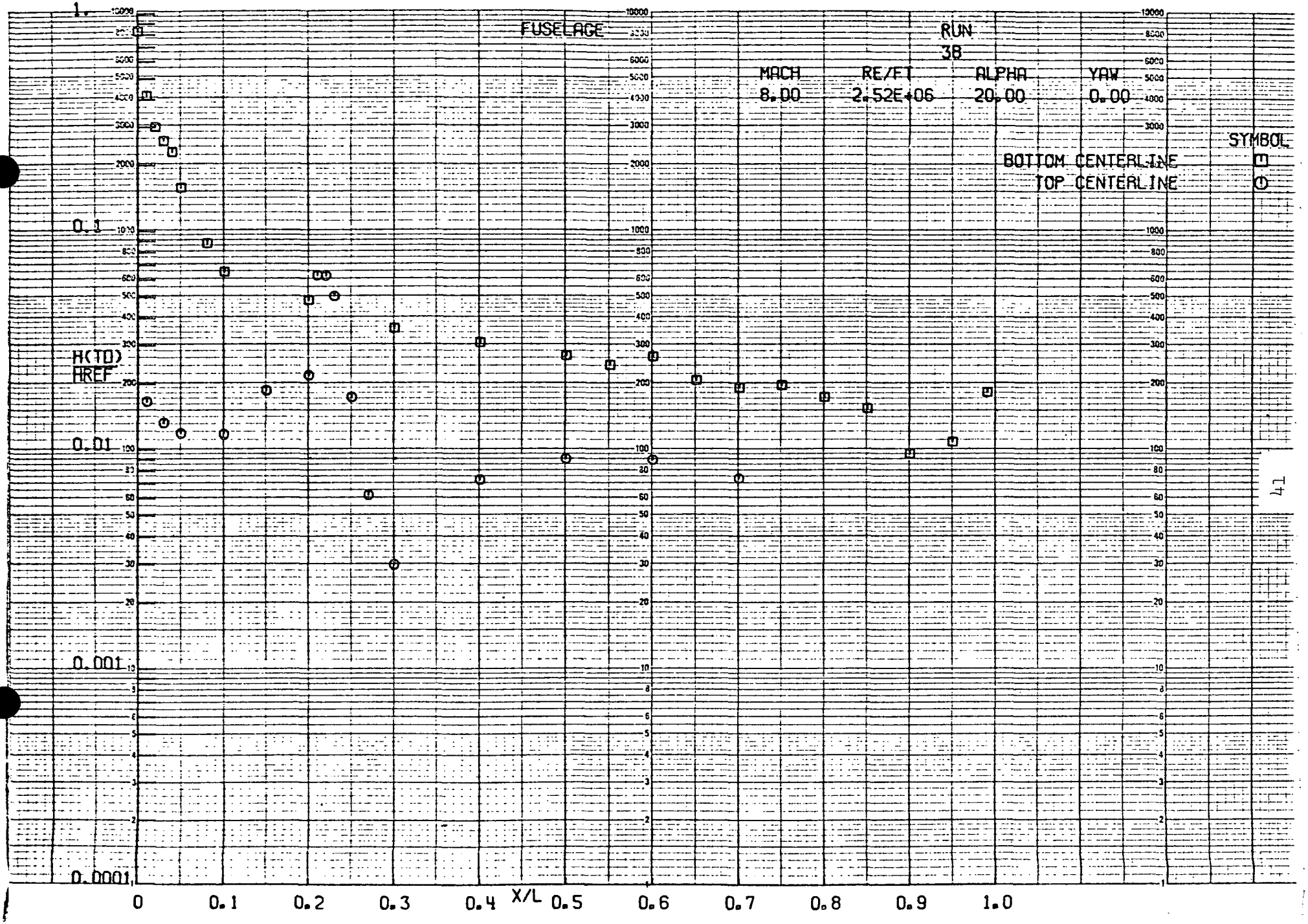
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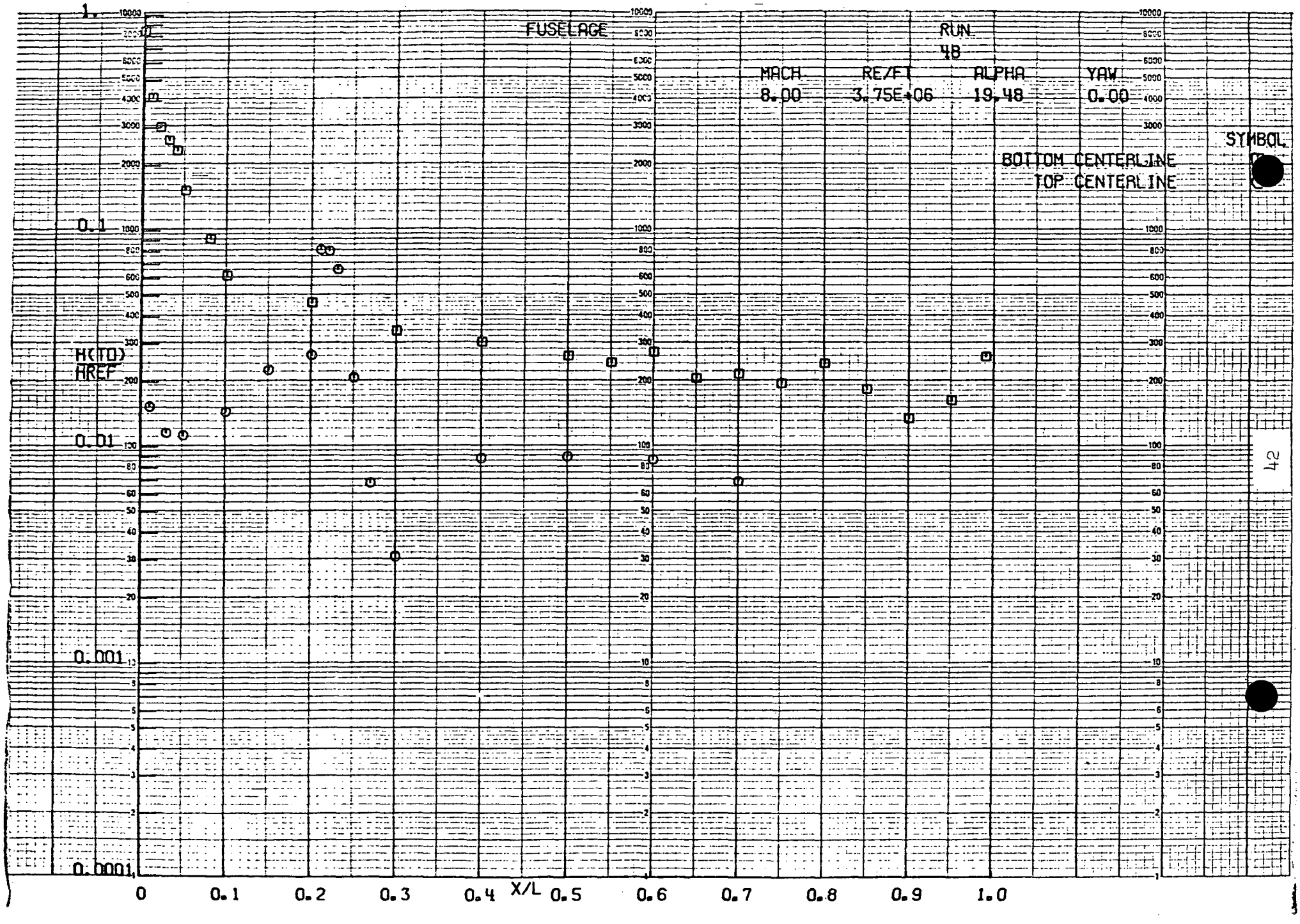
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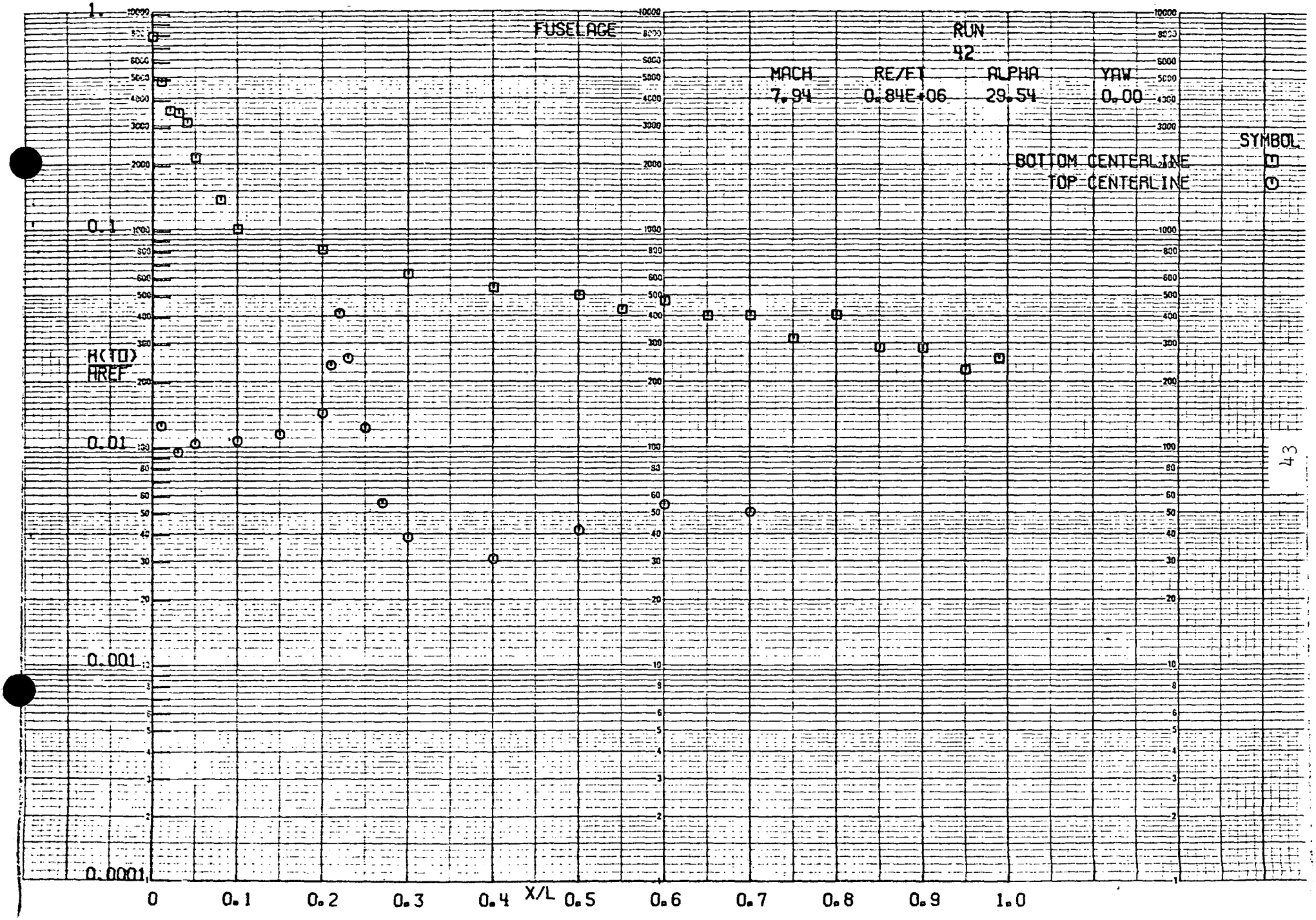
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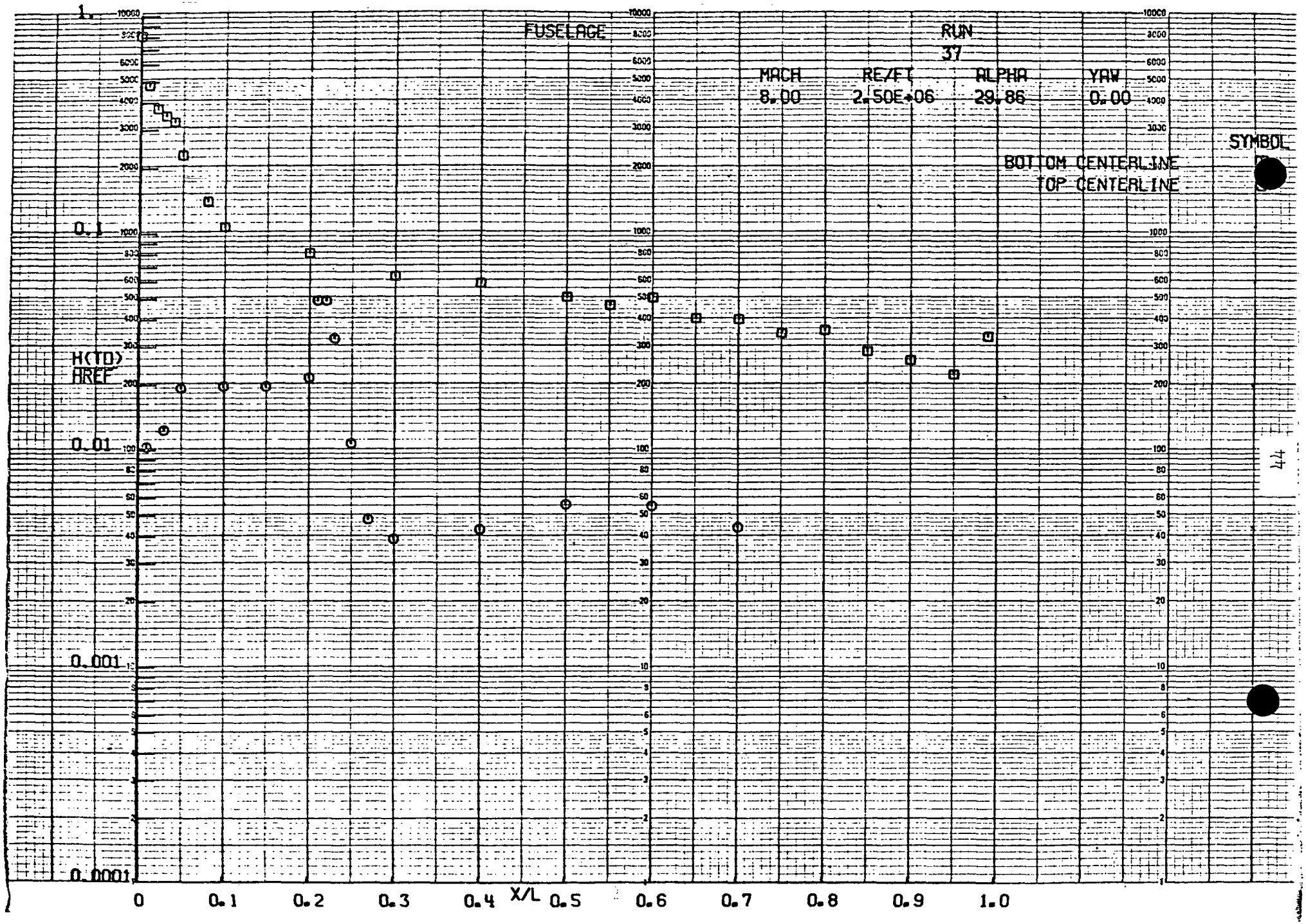
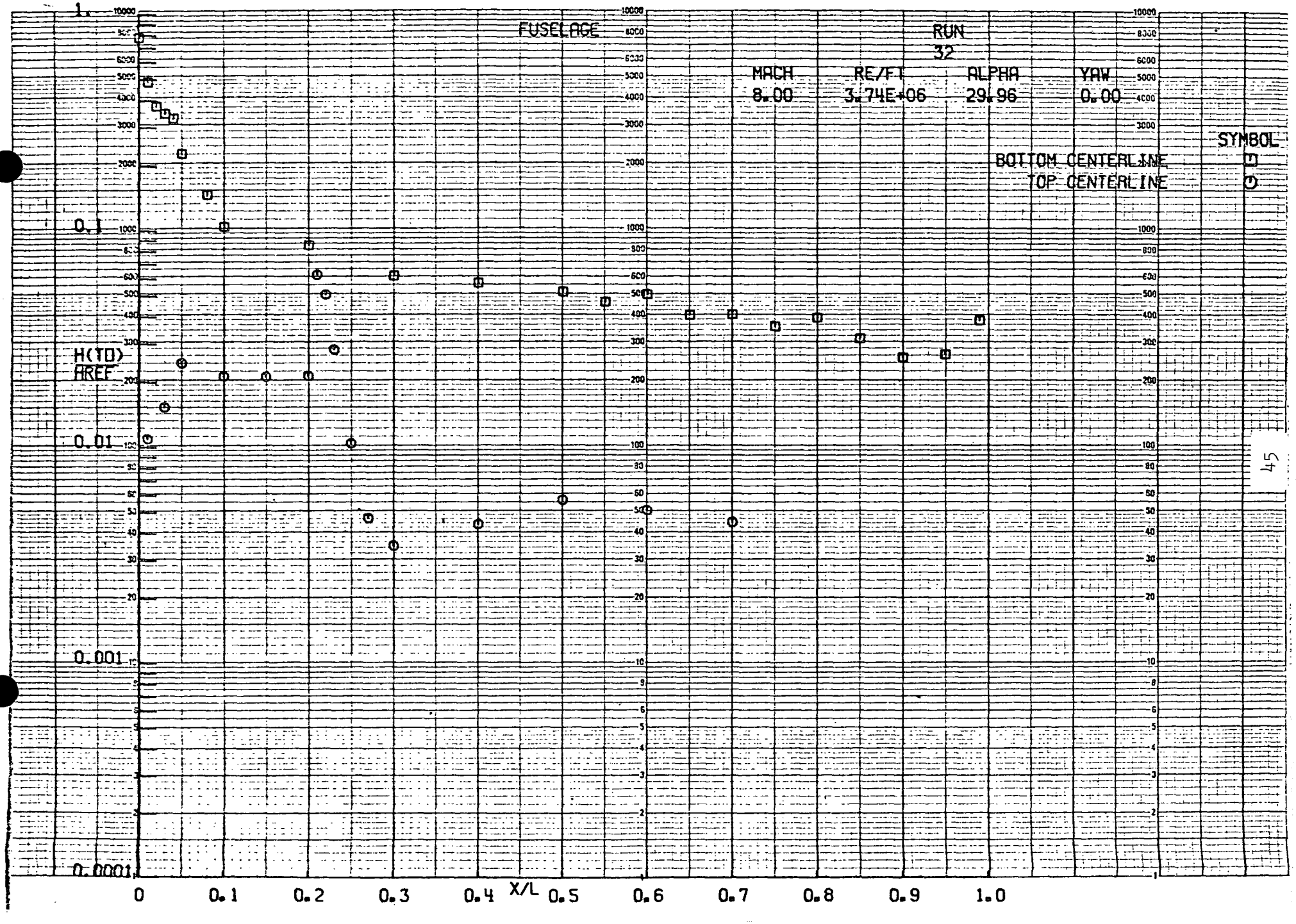
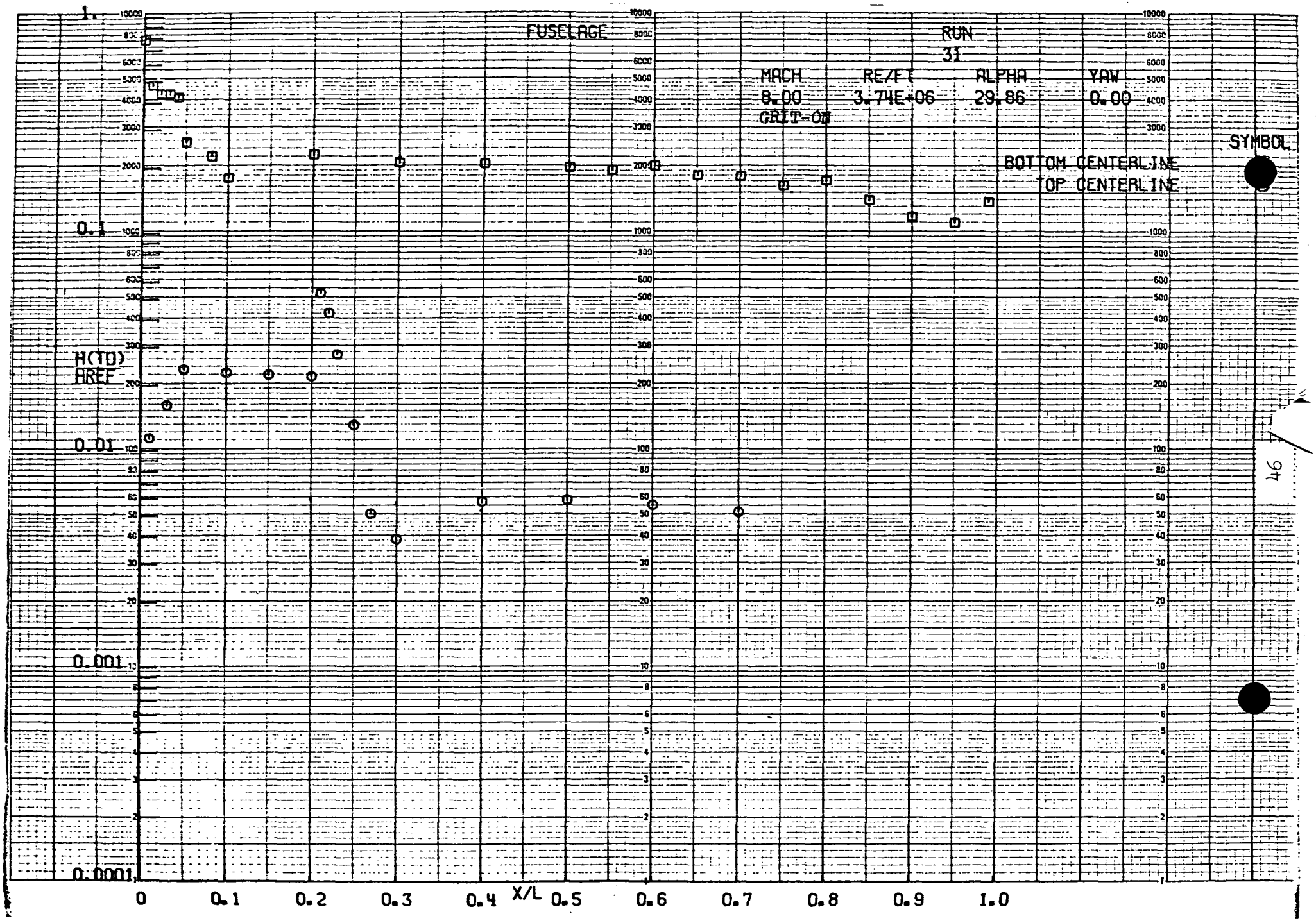
43


FUSELAGE
RUN
37
MACH
8.00
RE/FT
2.50E+06
ALPHA
29.86
YAW
0.00
SYMBOL
BOTTOM CENTERLINE
TOP CENTERLINE
H(TD)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/L
0.5
0.6
0.7
0.8
0.9
1.0


FUSELAGE
RUN
32
MACH
8.00
RE/FT
3.74E+06
ALPHA
29.96
YAW
0.00
SYMBOL
BOTTOM CENTERLINE
TOP CENTERLINE
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/L
0.5
0.6
0.7
0.8
0.9
1.0


FUSELAGE
RUN
31
MACH
8.00
RE/FT
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ALPHA
29.86
YAW
0.00
CRIT-ON
SYMBOL
BOTTOM CENTERLINE
TOP CENTERLINE
H(TD)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
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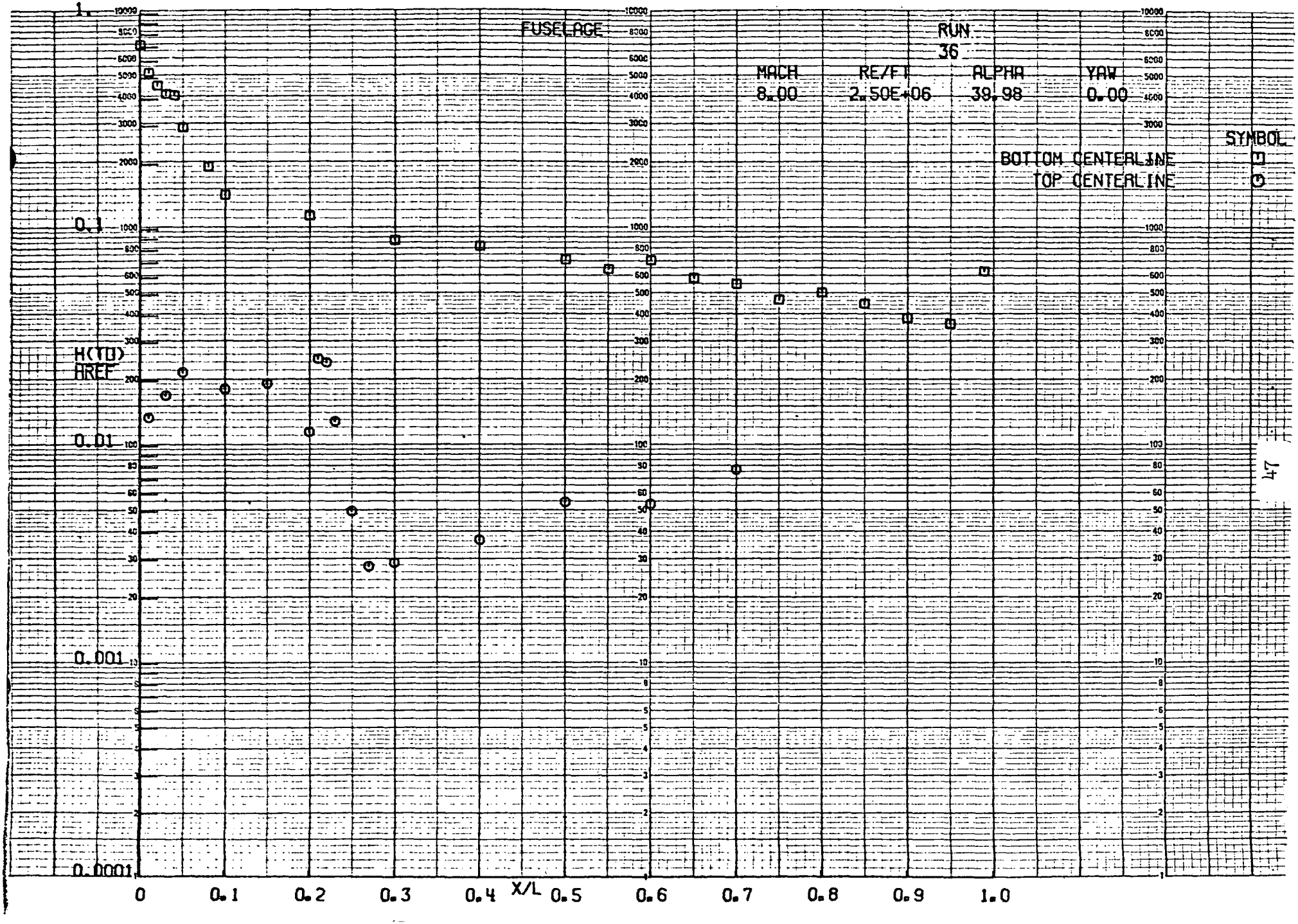
0.3
0.4
X/L
0.5
0.6
0.7
0.8
0.9
1.0
94


FUSELAGE
RUN
36
MACH
8.00
RE/FT
2.50E+06
ALPHA
39.98
YAW
0.00
SYMBOL
BOTTOM CENTERLINE
TOP CENTERLINE
1.
0.1
0.01
0.001
0.0001
H(TU)
HREF
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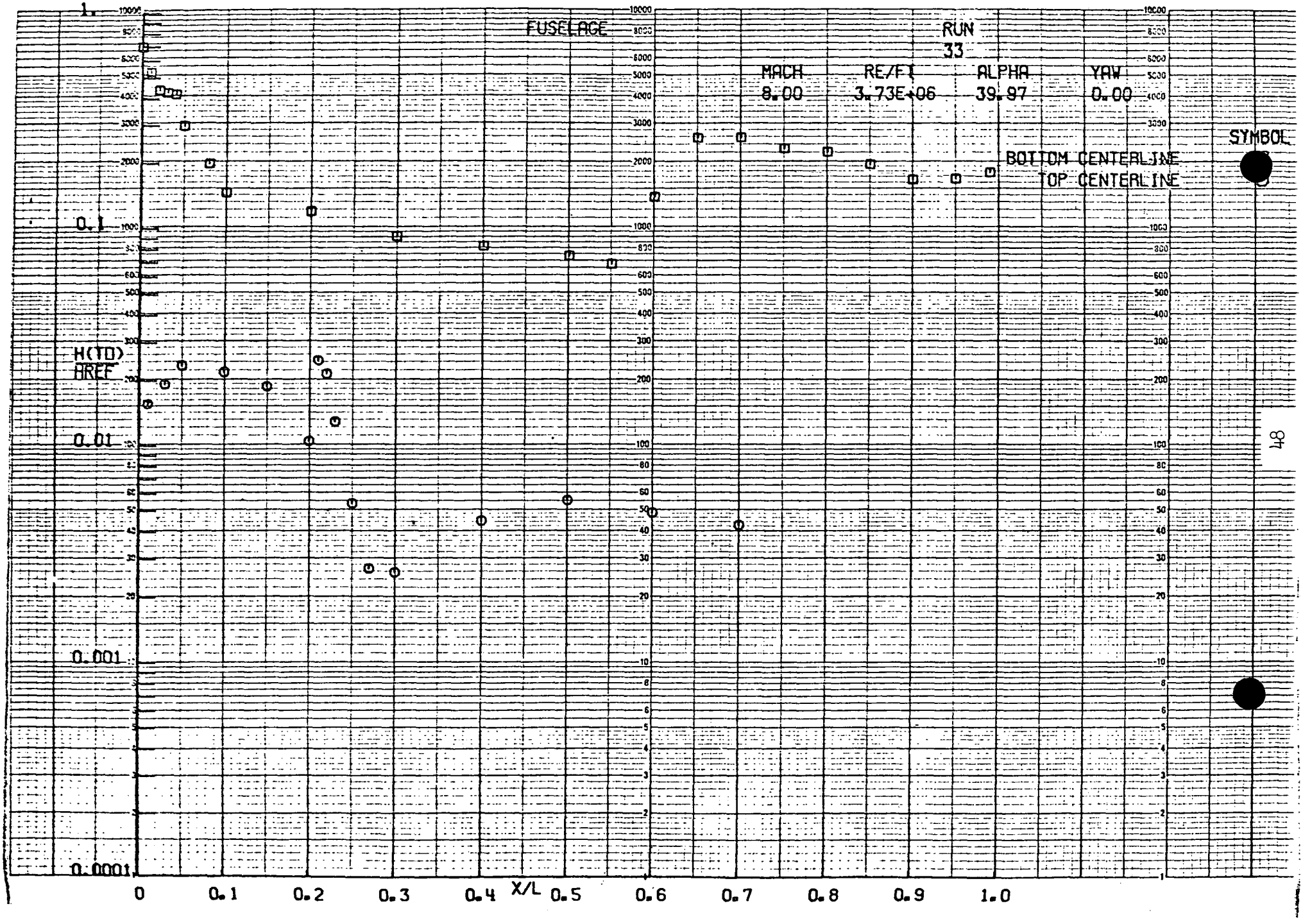
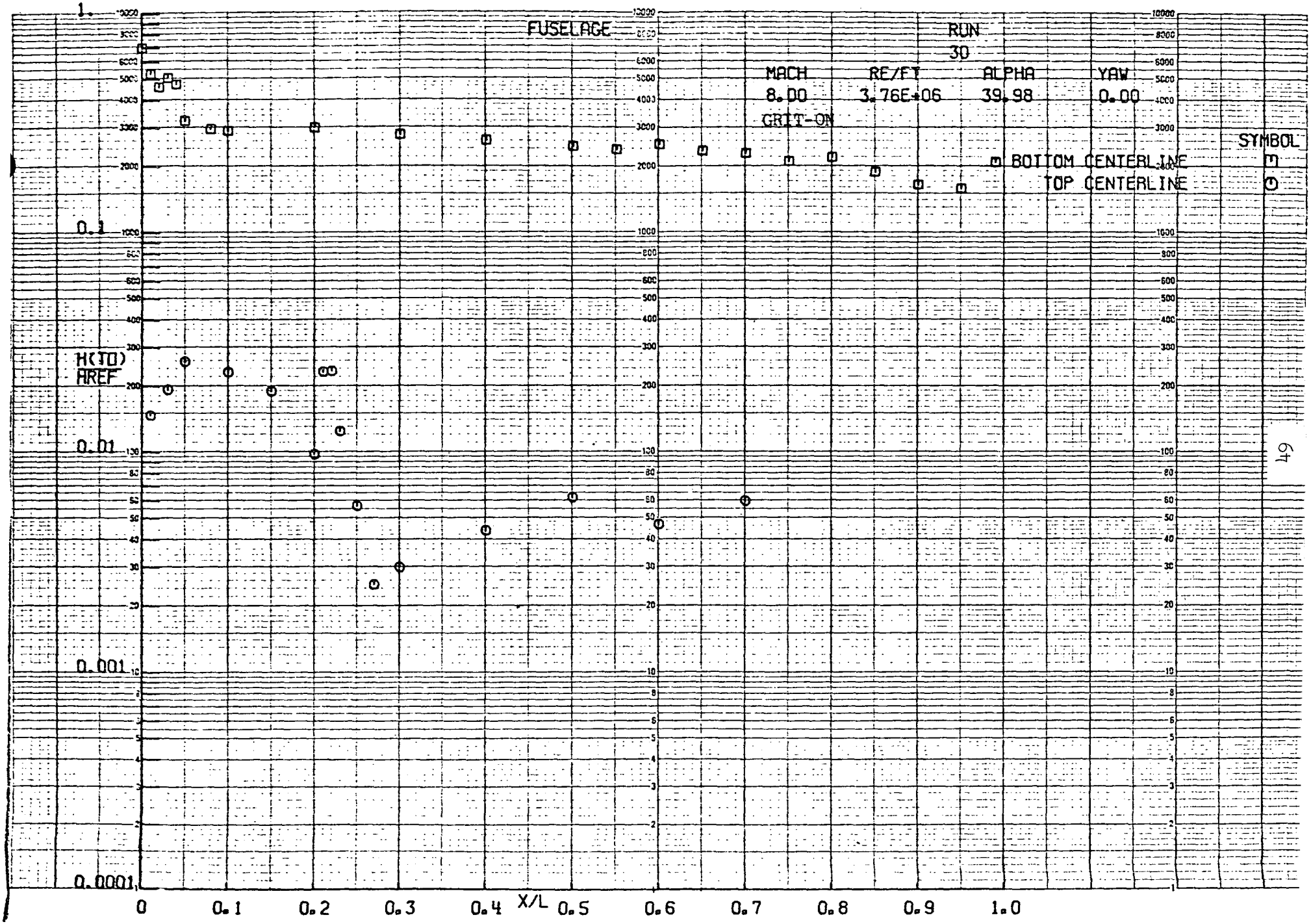
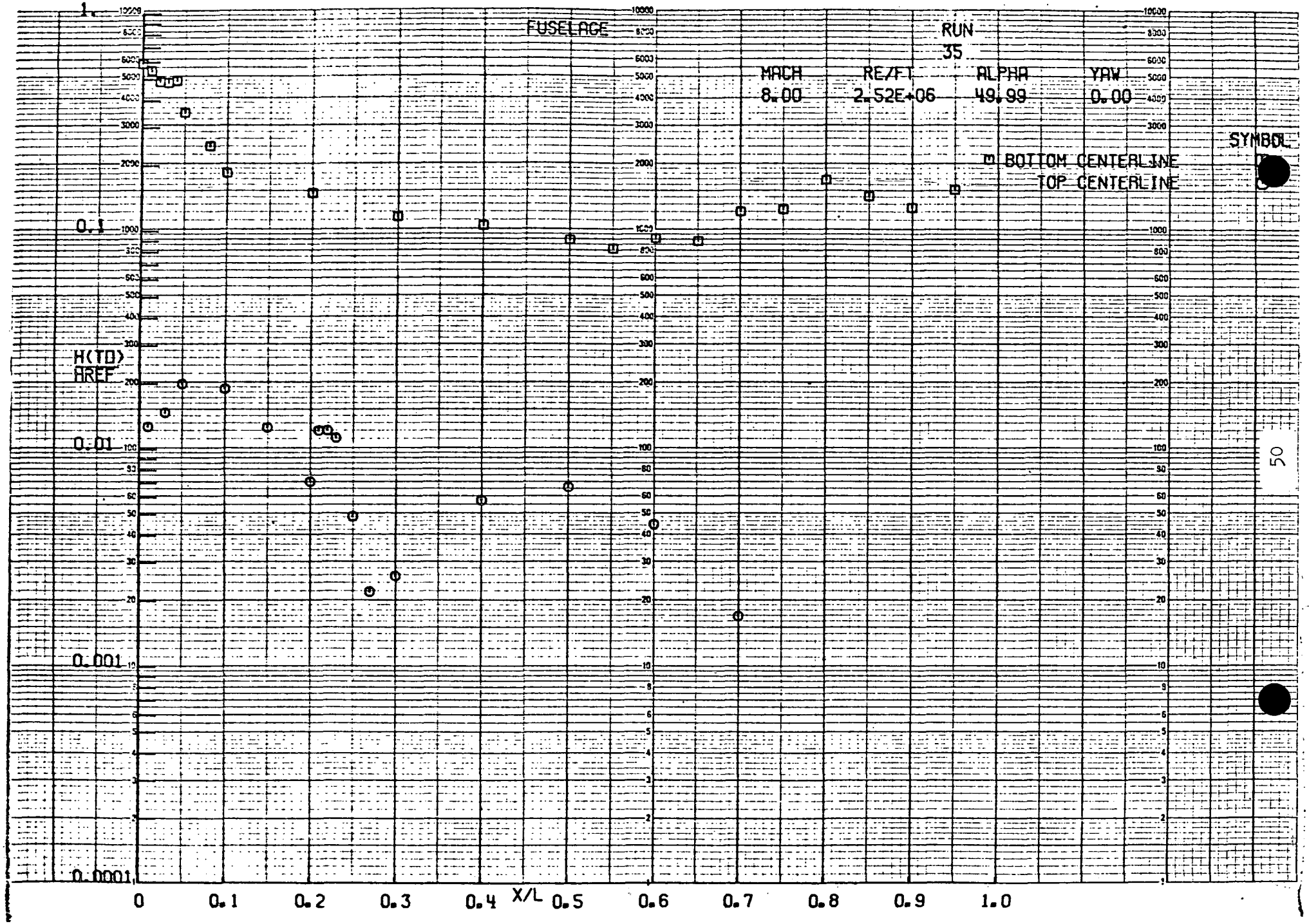
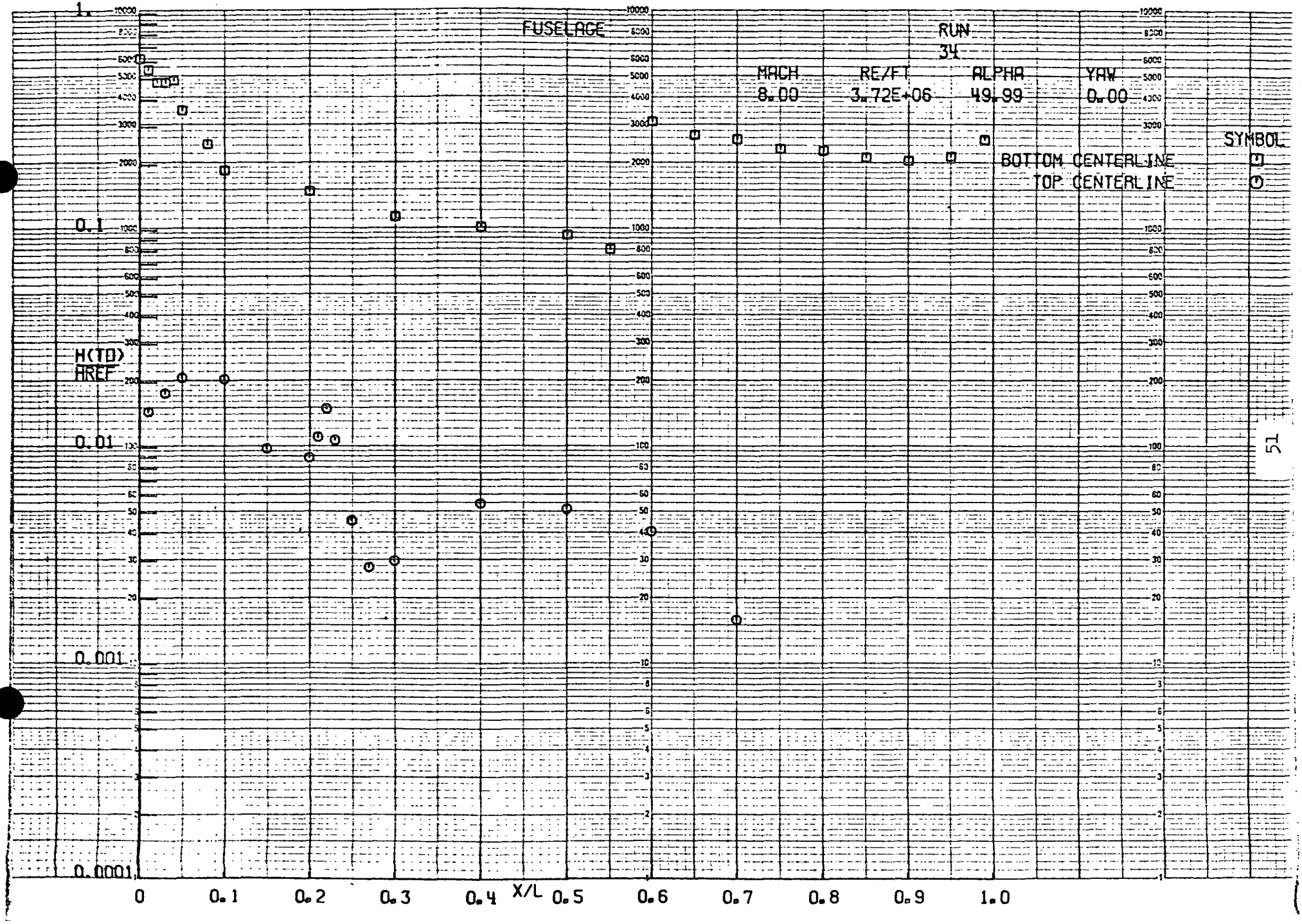
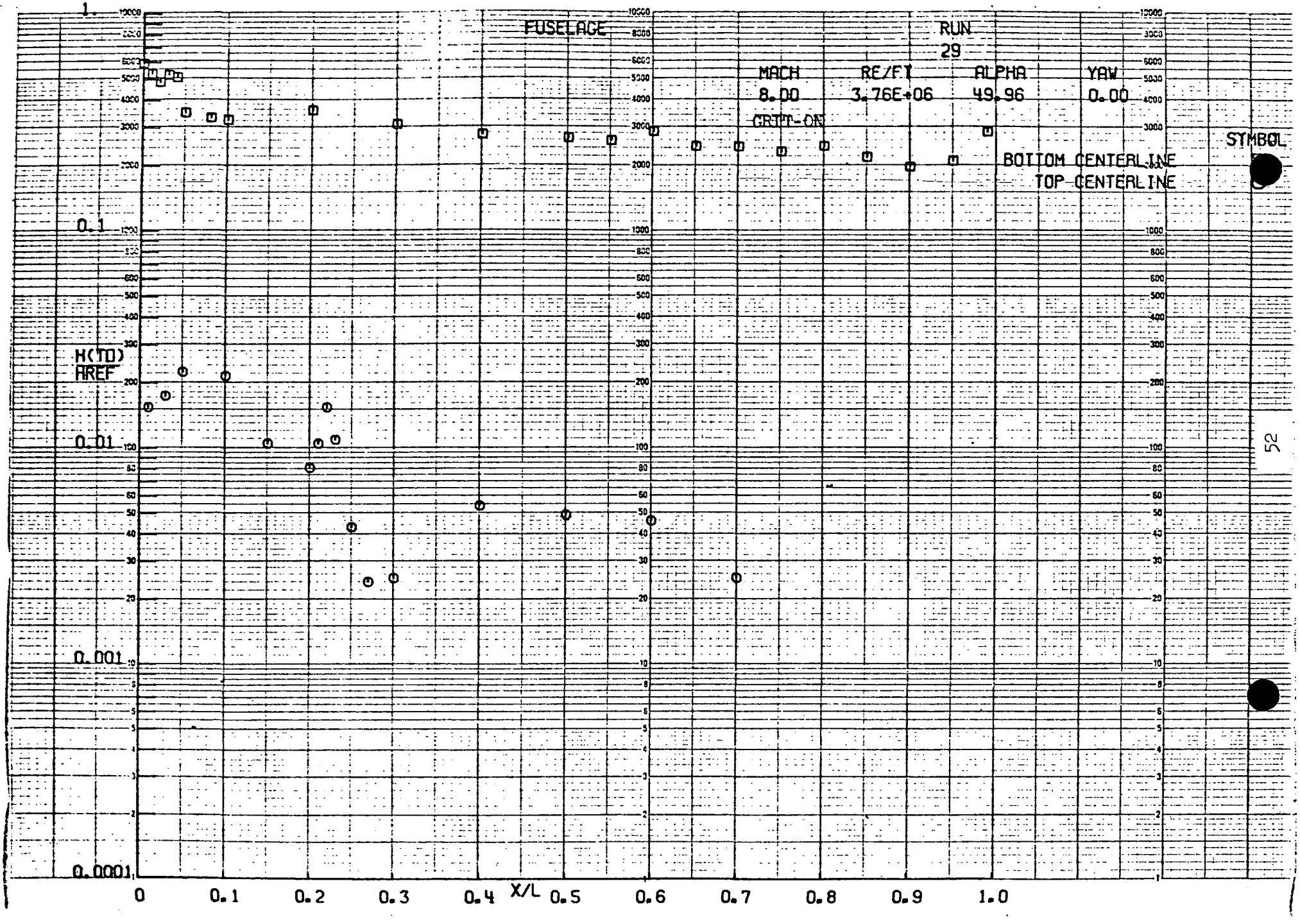
0.2
0.3
0.4
X/L
0.5
0.6
0.7
0.8
0.9
1.0

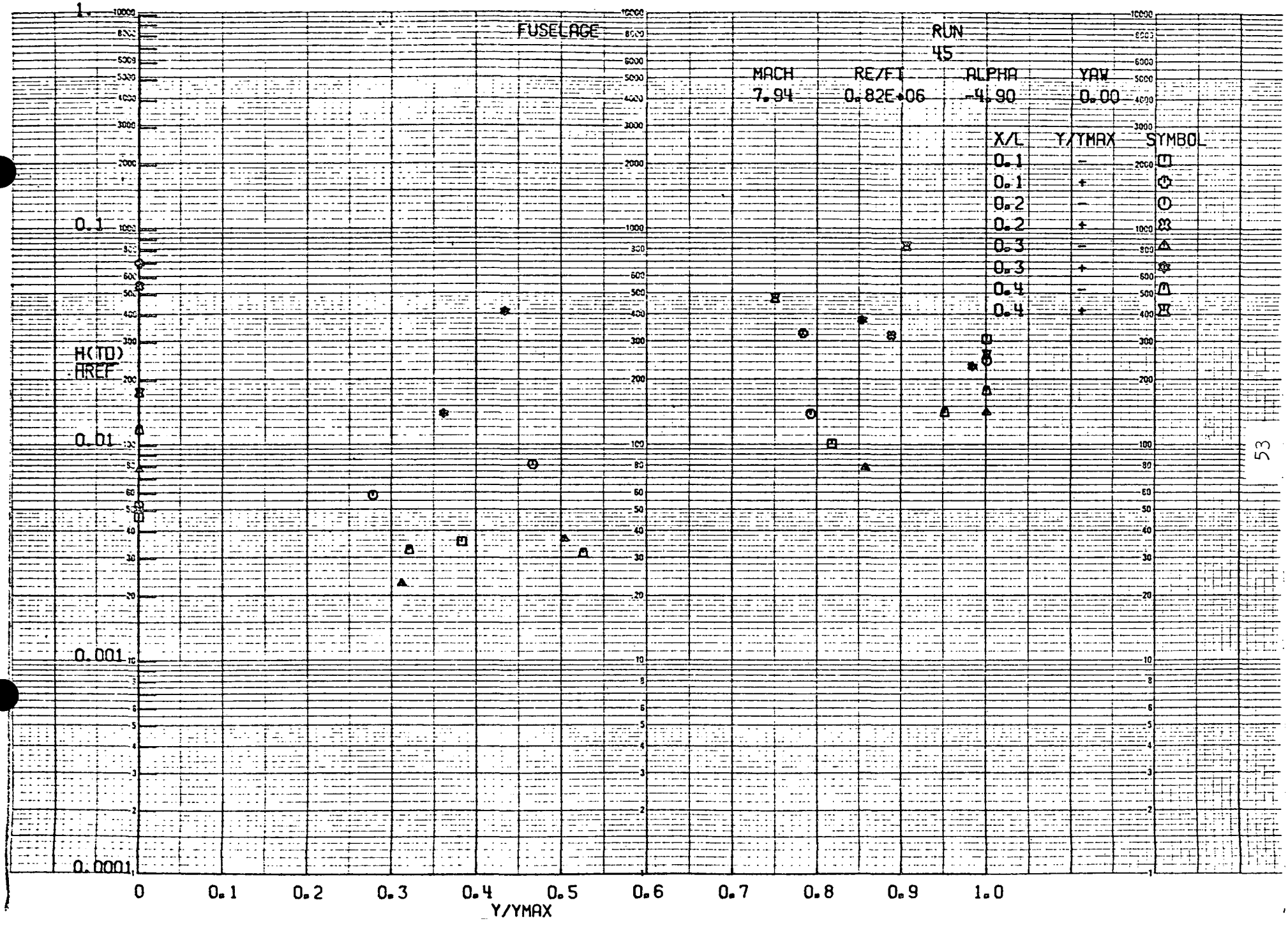

FUSELAGE
RUN
33
MACH
8.00
RE/FT
3.73E+06
ALPHA
39.97
YAW
0.00
SYMBOL
BOTTOM CENTERLINE
TOP CENTERLINE
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/L
0.5
0.6
0.7
0.8
0.9
1.0

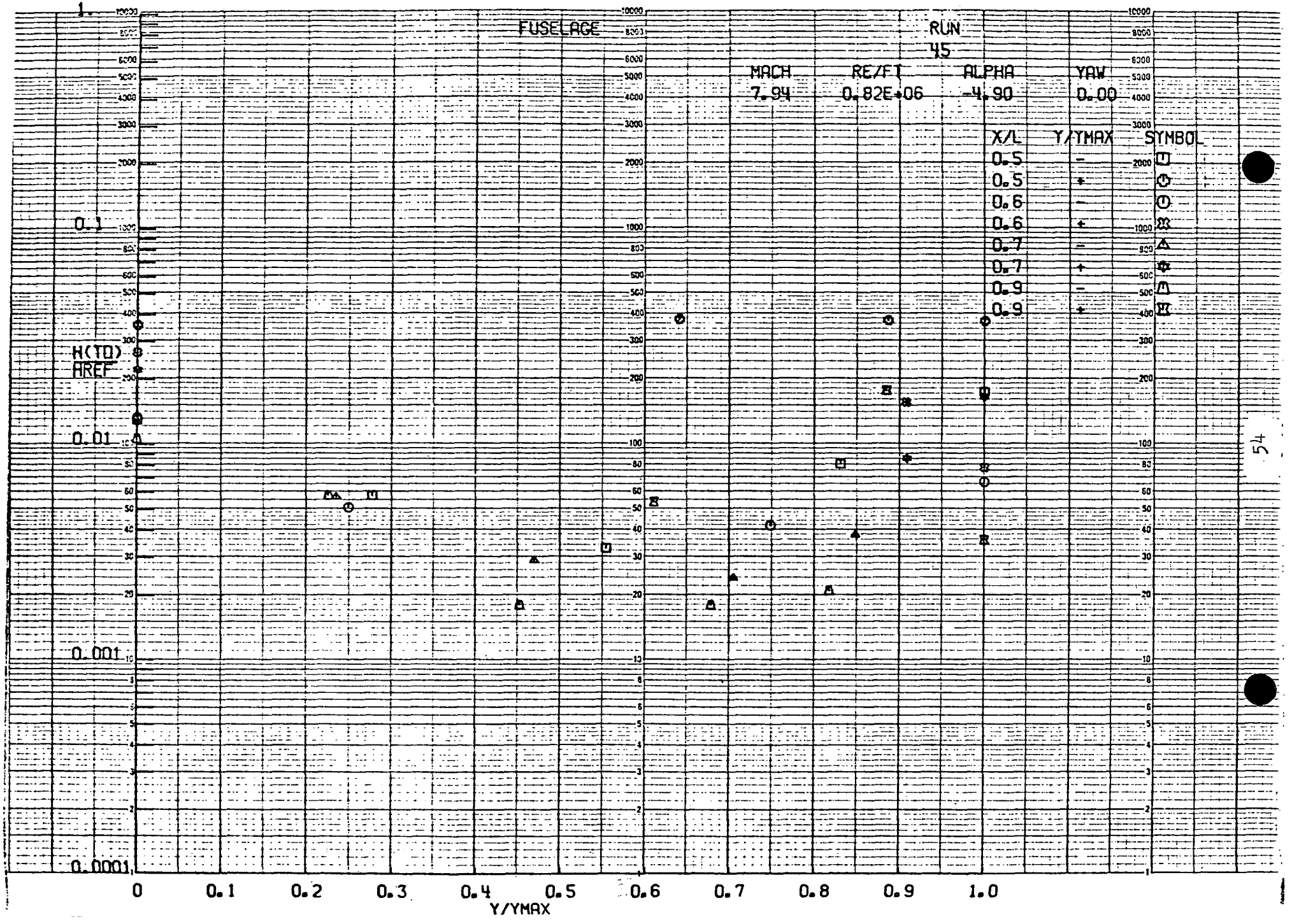

FUSELAGE
RUN
30
MACH
8.00
RE/FT
3.76E+06
ALPHA
39.98
YAW
0.00
GRIT-ON
SYMBOL
BOTTOM CENTERLINE
TOP CENTERLINE
H(TO)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/L
0.5
0.6
0.7
0.8
0.9
1.0

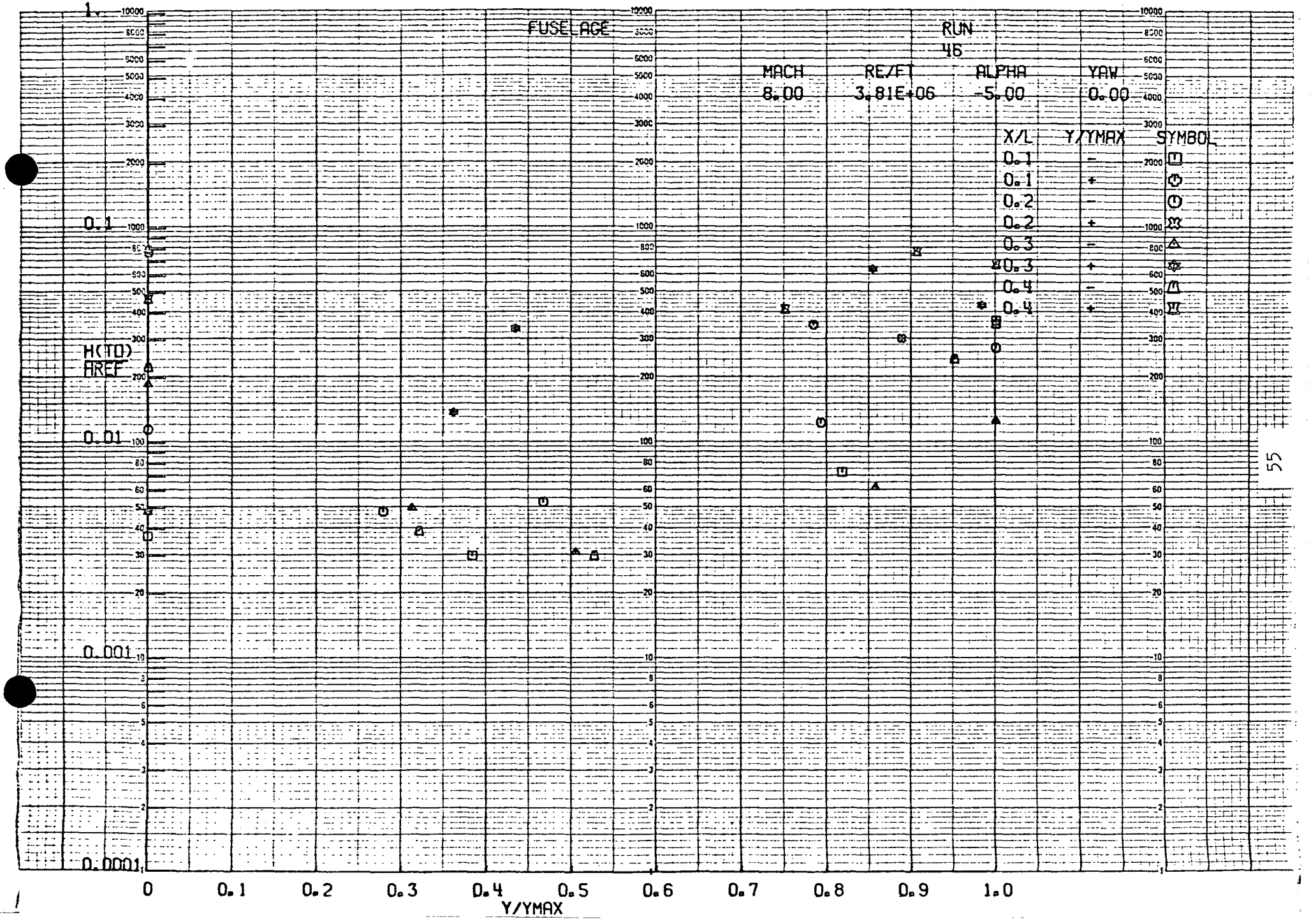

FUSELAGE
RUN
35
MACH
8.00
RE/FT
2.52E+06
ALPHA
49.99
YAW
0.00
SYMBOL
BOTTOM CENTERLINE
TOP CENTERLINE
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/L
0.5
0.6
0.7
0.8
0.9
1.0
50

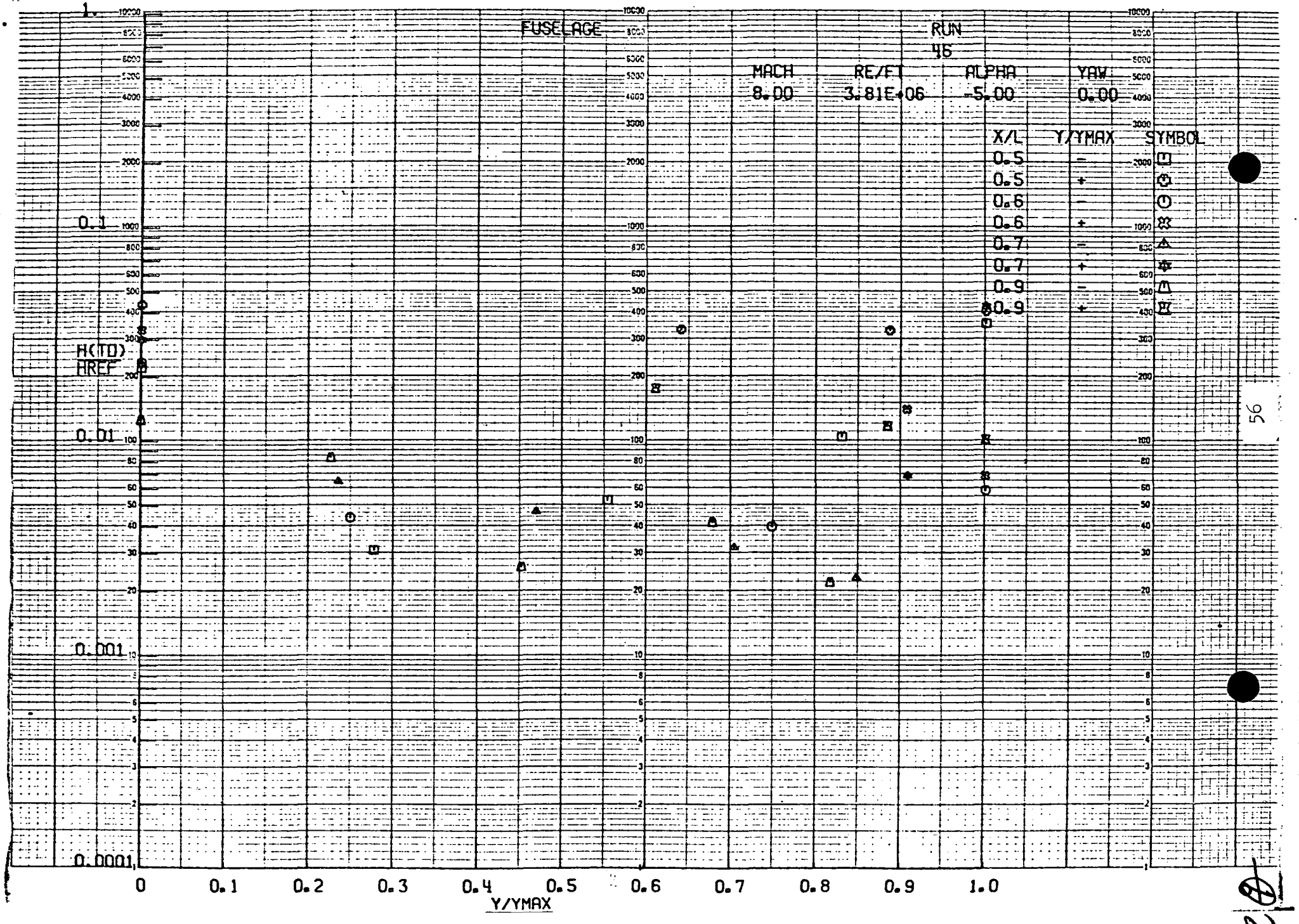

1.
FUSELAGE
RUN
34
MACH
8.00
RE/FT
3.72E+06
ALPHA
49.99
YAW
0.00
SYMBOL
BOTTOM CENTERLINE
TOP CENTERLINE
0.1
0.01
0.001
0.0001
H(TD)
HREF
0
0.1
0.2
0.3
0.4
X/L
0.5
0.6
0.7
0.8
0.9
1.0

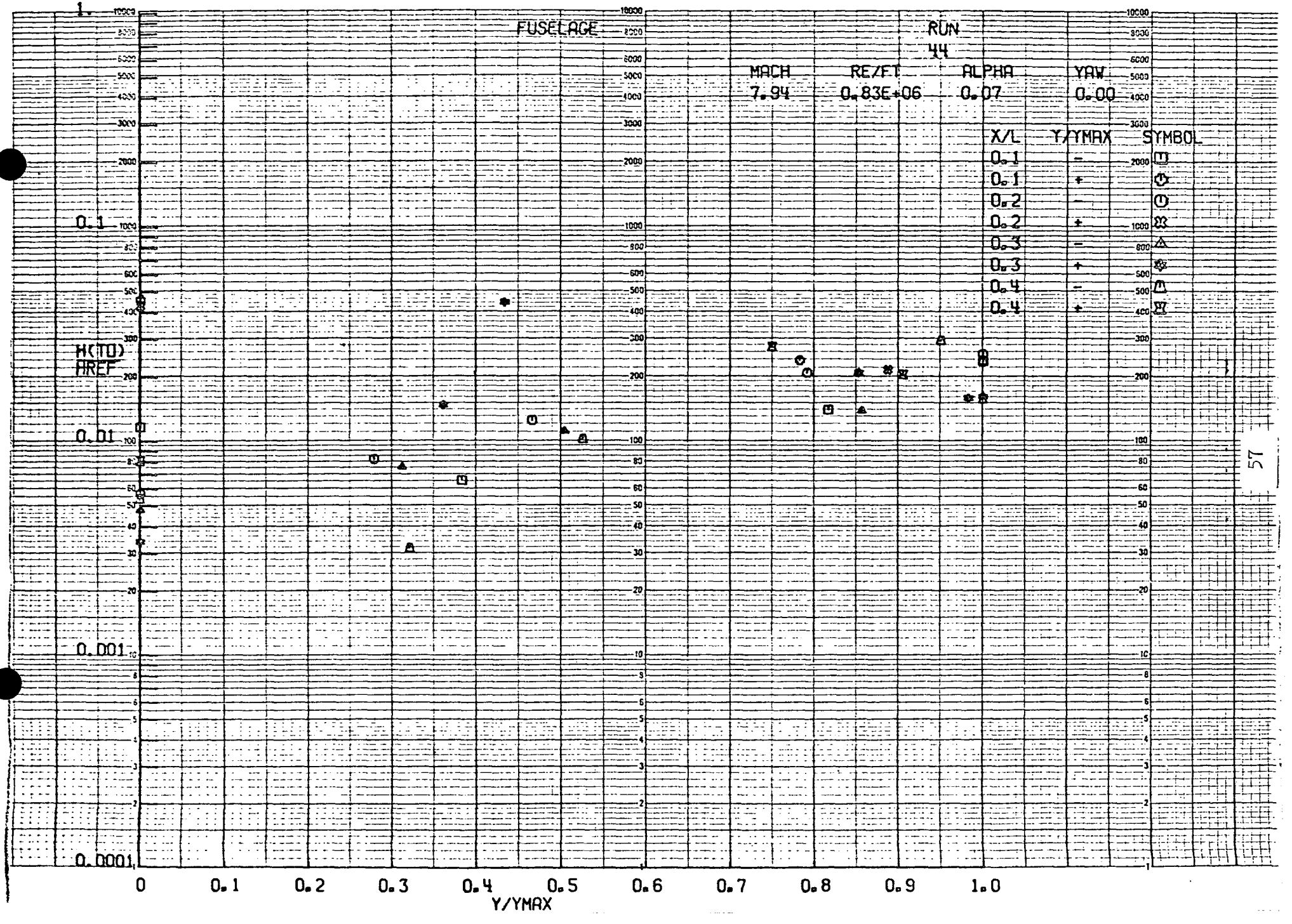

FUSELAGE
RUN
29
MACH
8.00
RE/FT
3.76E+06
ALPHA
49.96
YAW
0.00
GRID-ON
SYMBOL
BOTTOM CENTERLINE
TOP CENTERLINE
H(TD)
AREF
X/L
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0


FUSELAGE
RUN
45
MACH
7.94
RE/FT
0.82E+06
ALPHA
-4.90
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
1.
0.1
0.01
0.001
0.0001
H(TD)
AREF
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
45
MACH
7.94
RE/FT
0.82E+06
ALPHA
-4.90
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 −
0.5 +
0.6 −
0.6 +
0.7 −
0.7 +
0.9 −
0.9 +
H(TO)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
46
MACH
8.00
RE/FT
3.81E+06
ALPHA
-5.00
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
45
MACH
8.00
RE/FT
3.81E+06
ALPHA
-5.00
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 −
0.5 +
0.6 −
0.6 +
0.7 −
0.7 +
0.9 −
0.9 +
1.
0.1
0.01
0.001
0.0001
H(TD)/HREF
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
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MACH
7.94
RE/FT
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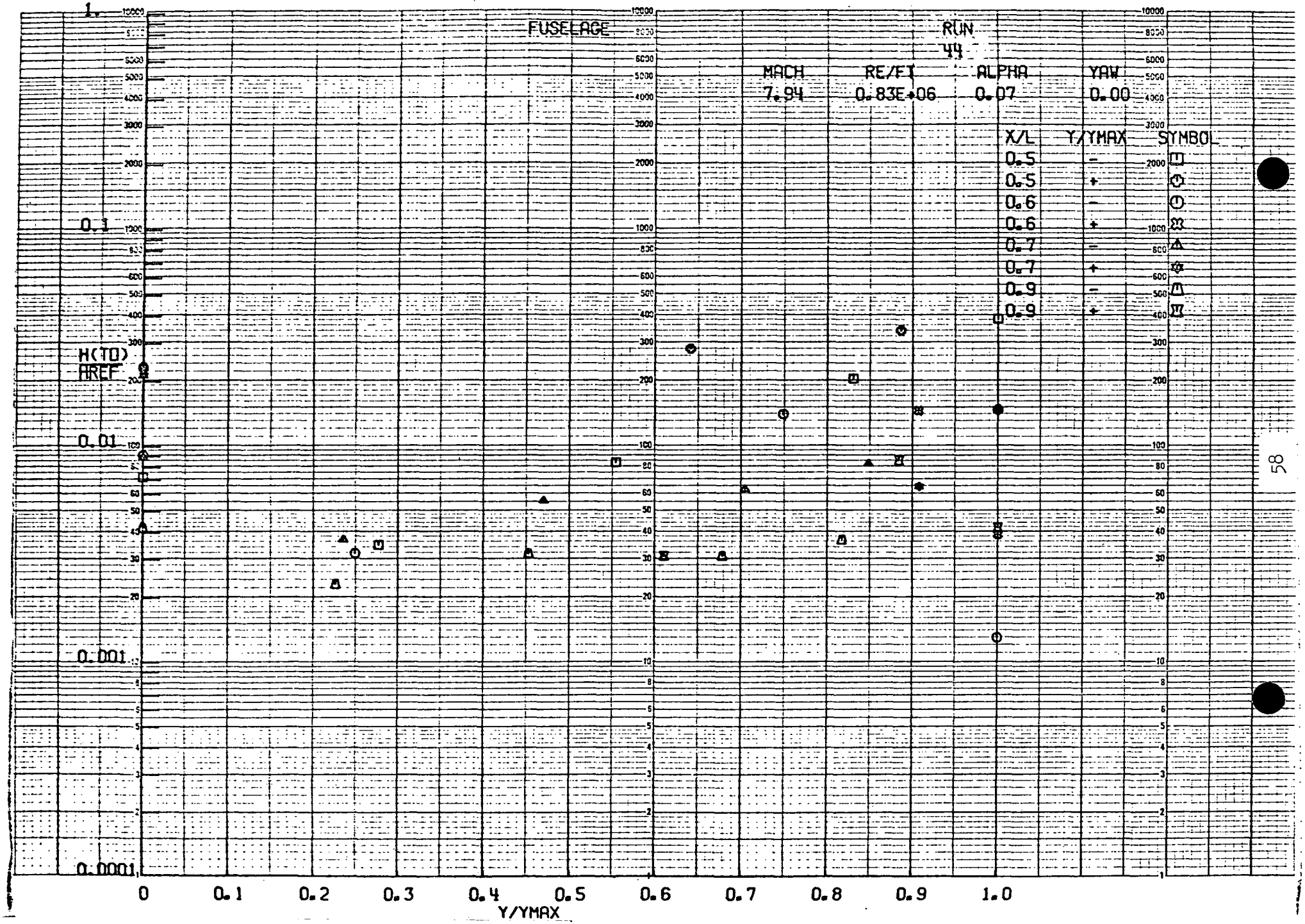
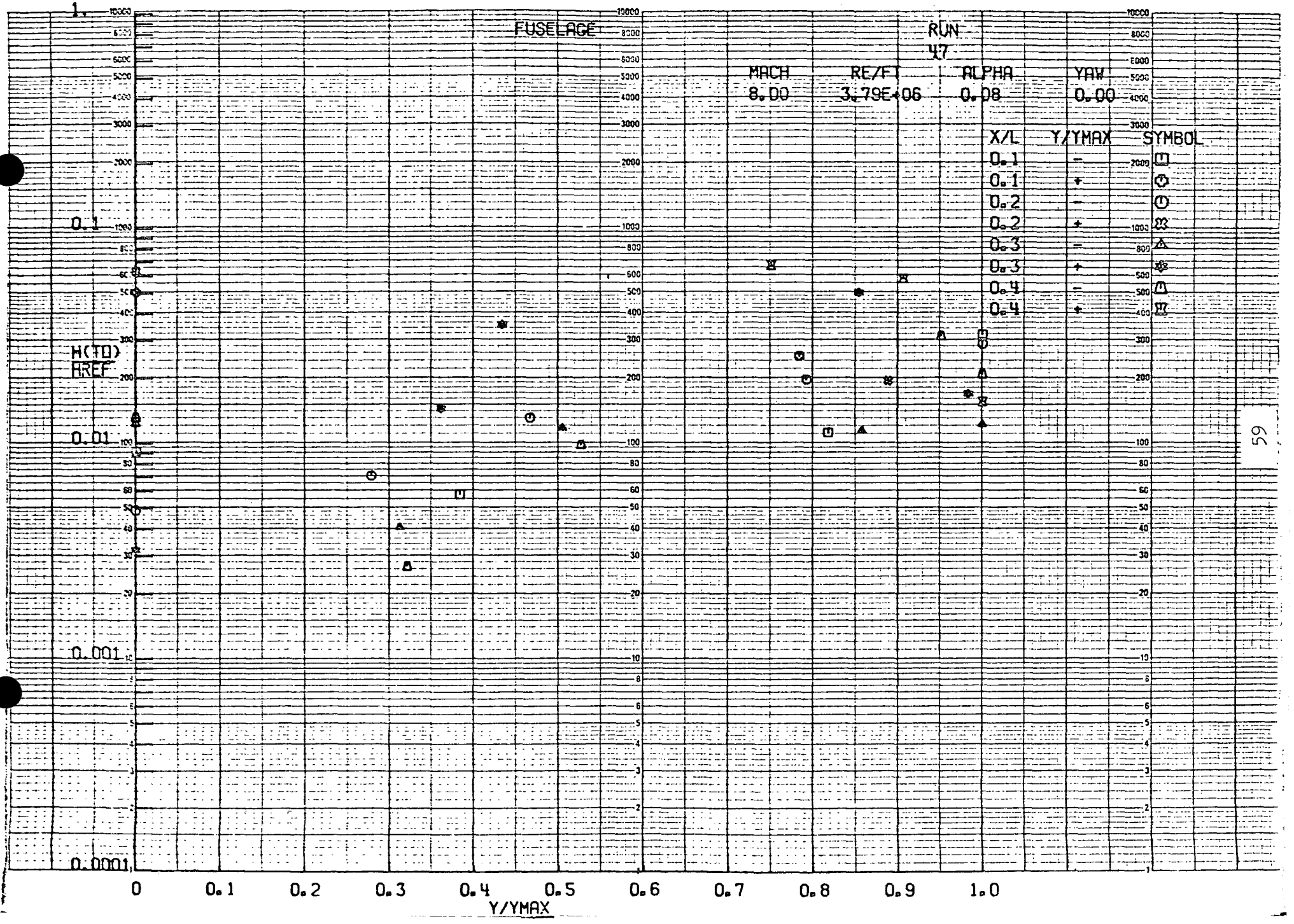
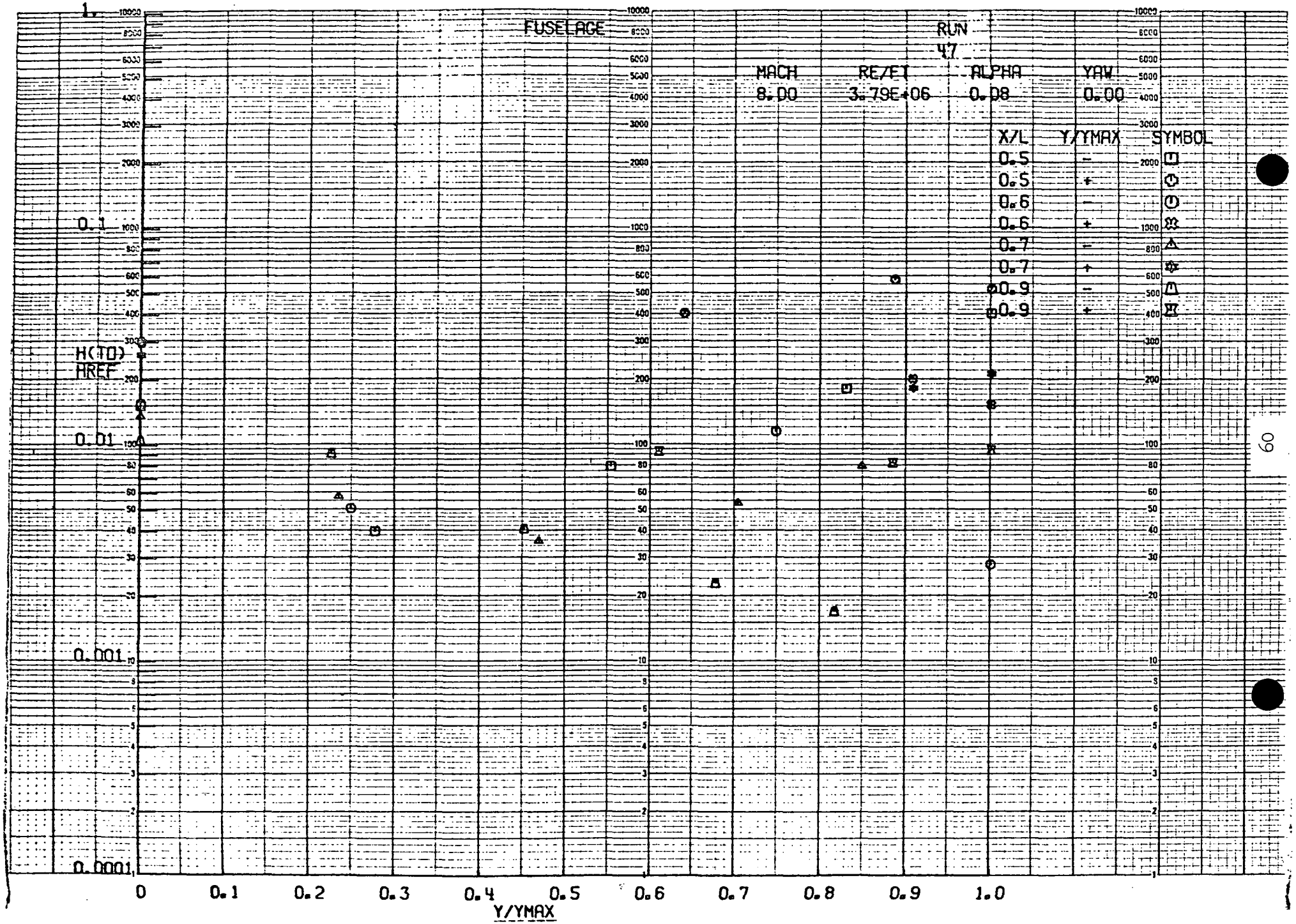
ALPHA
0.07
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
1.
0.1
0.01
0.001
0.0001
H(TU)
AREF
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
44
MACH
7.94
RE/FT
0.83E+06
ALPHA
0.07
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 −
0.5 +
0.6 −
0.6 +
0.7 −
0.7 +
0.9 −
0.9 +
H(TO)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
47
MACH
8.00
RE/FT
3.79E+06
ALPHA
0.08
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 –
0.1 +
0.2 –
0.2 +
0.3 –
0.3 +
0.4 –
0.4 +
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
47
MACH
8.00
RE/FT
3.79E+06
ALPHA
0.08
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 -
0.5 +
0.6 -
0.6 +
0.7 -
0.7 +
0.9 -
0.9 +
H(TO)
HREF
1.
0.1
0.01
0.001
0.0001
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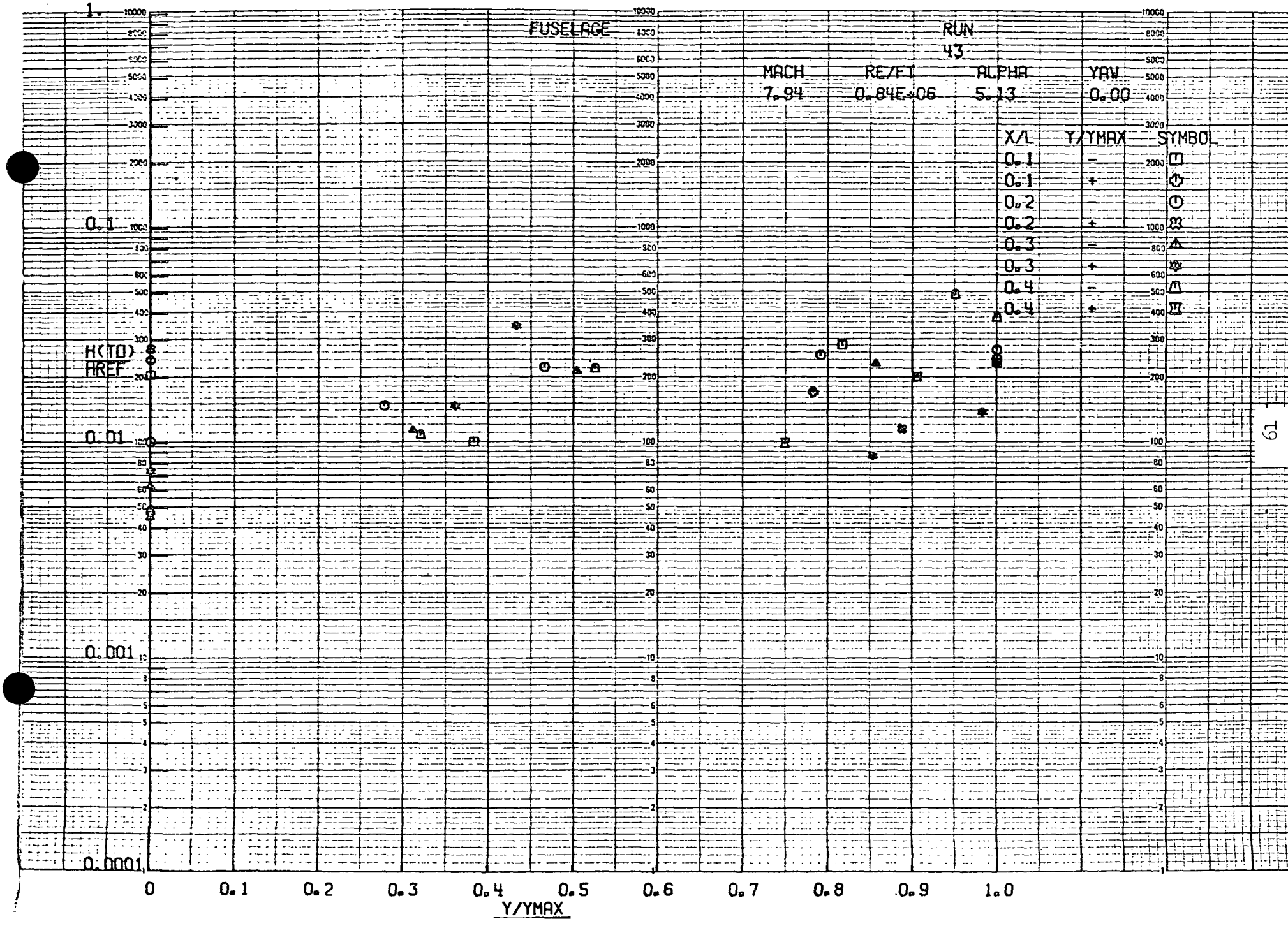
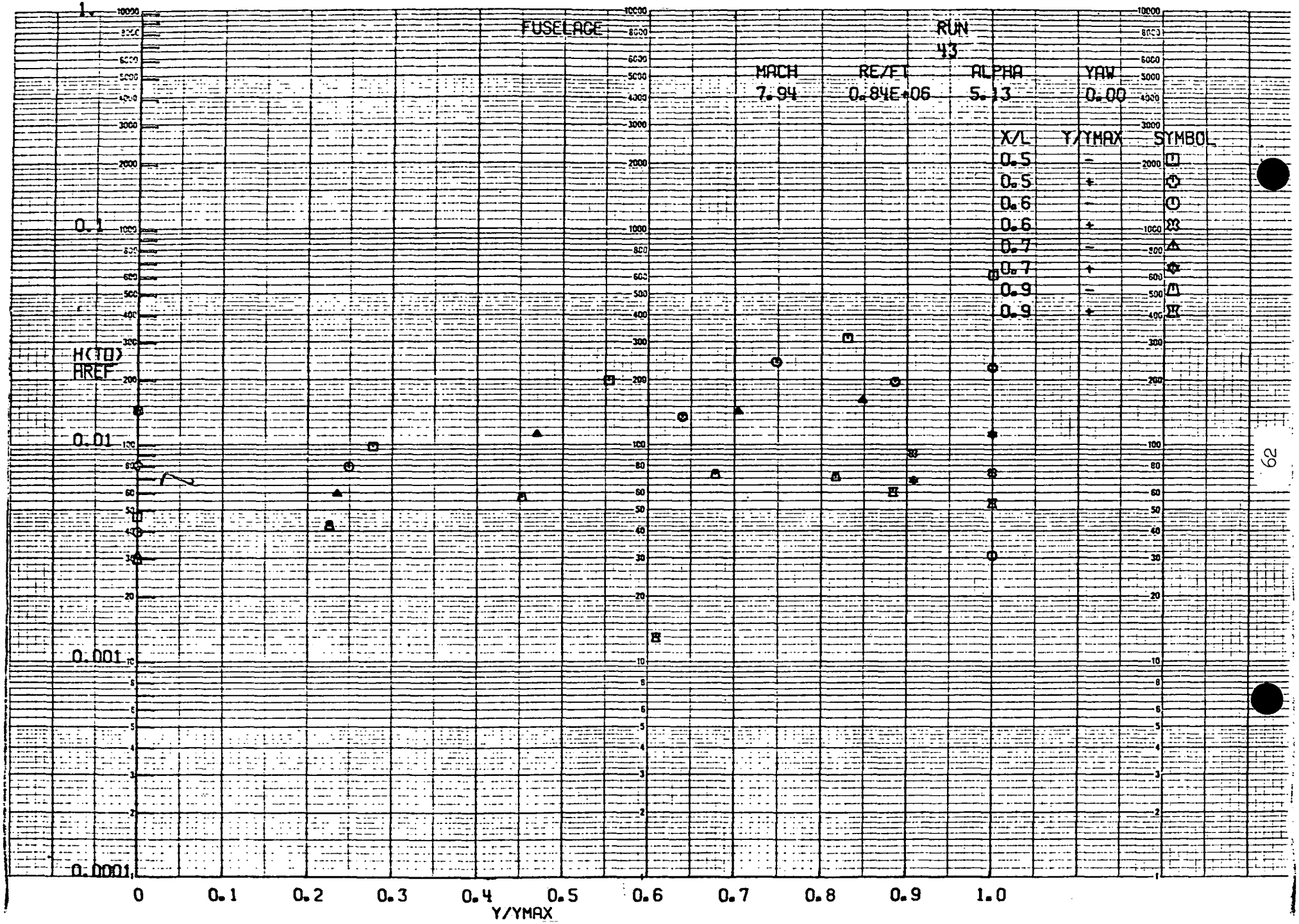
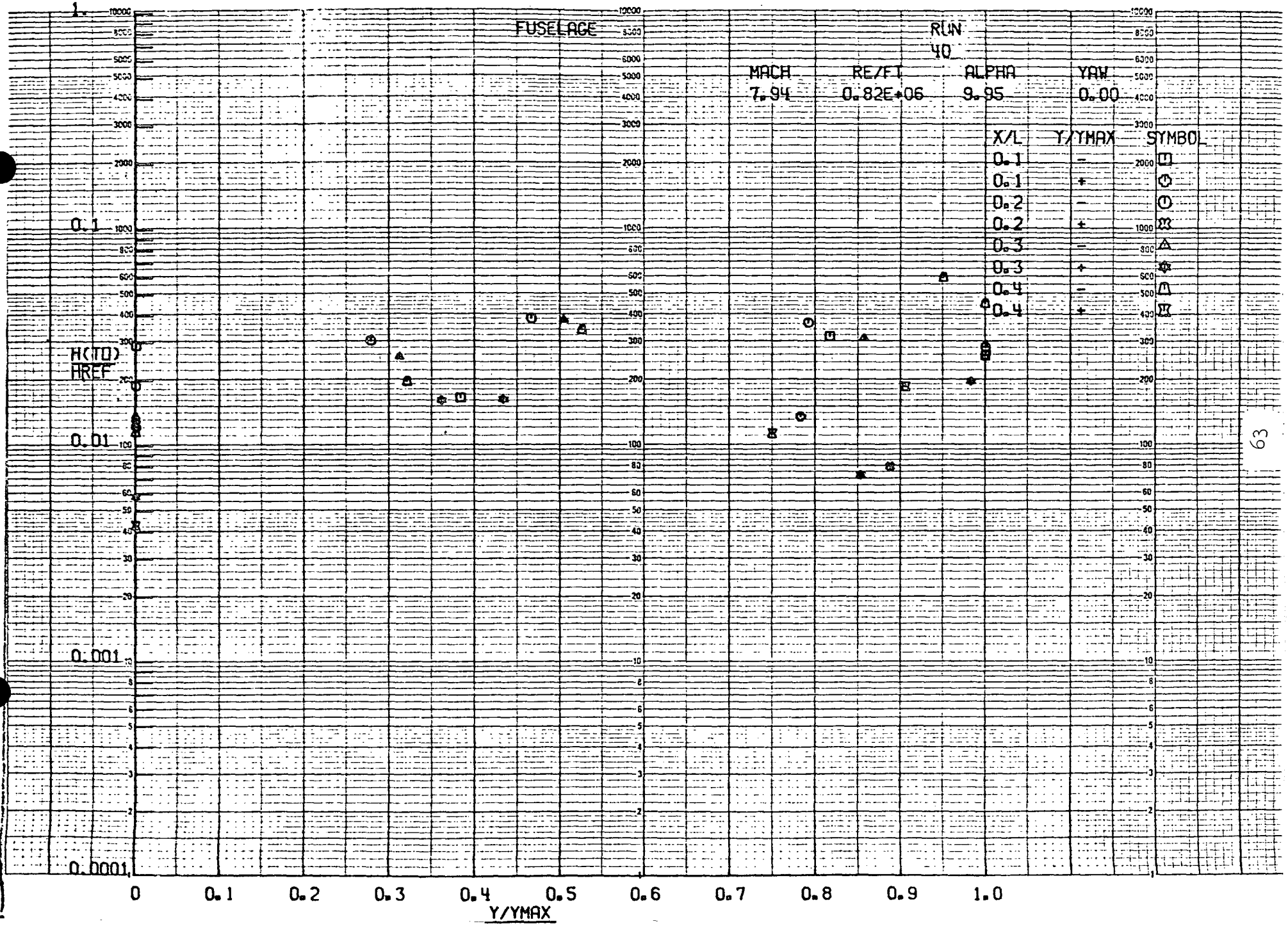
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
43
MACH
7.94
RE/FT
0.84E+06
ALPHA
5.13
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 –
0.1 +
0.2 –
0.2 +
0.3 –
0.3 +
0.4 –
0.4 +
H(TD)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
43
MACH
7.94
RE/FT
0.84E+06
ALPHA
5.13
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 –
0.5 +
0.6 –
0.6 +
0.7 –
0.7 +
0.9 –
0.9 +
H(TO)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
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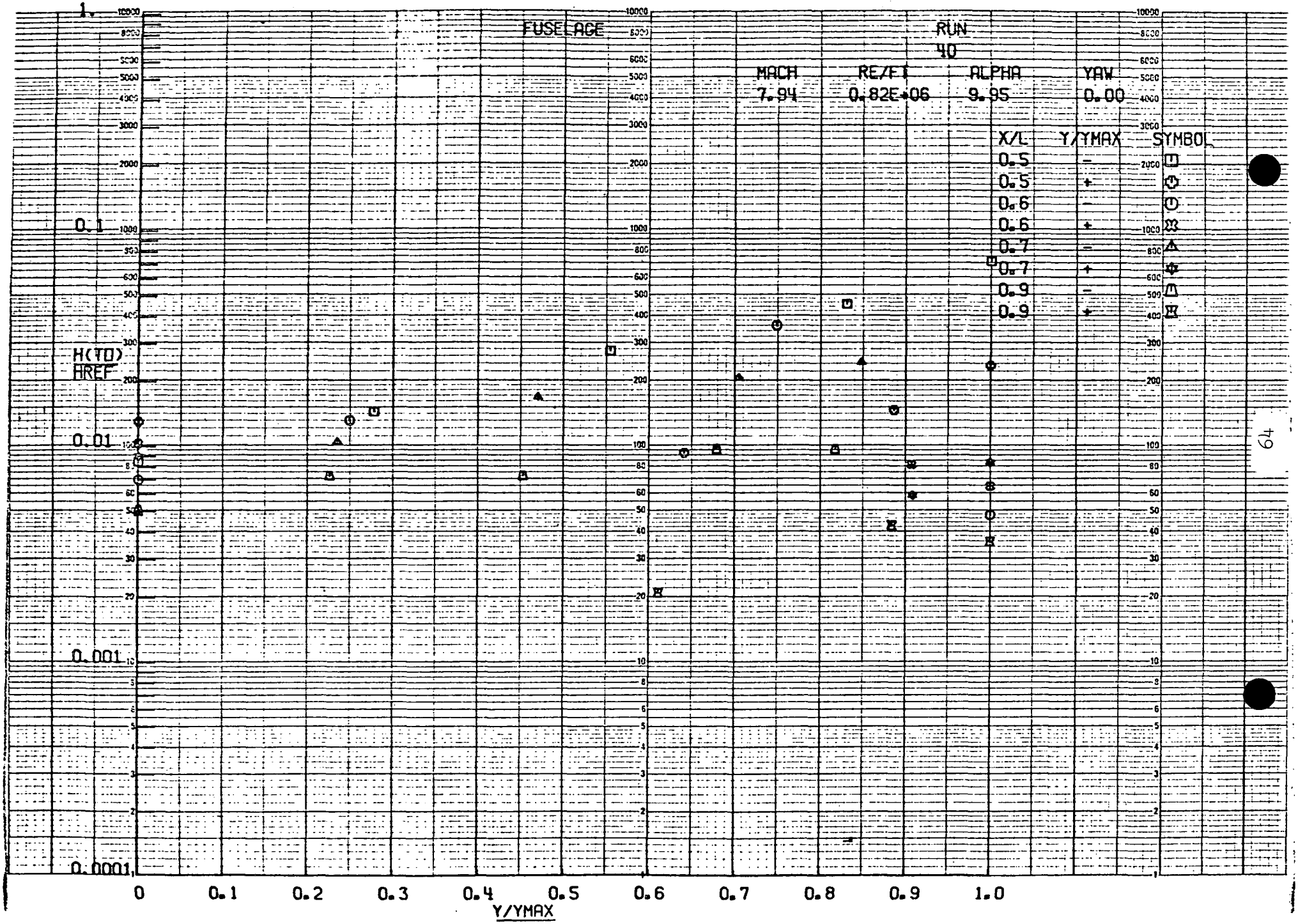
MACH
7.94
RE/FT
0.82E+06
ALPHA
9.95
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
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MACH
7.94
RE/FT
0.82E+06
ALPHA
9.95
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 –
0.5 +
0.6 –
0.6 +
0.7 –
0.7 +
0.9 –
0.9 +
1.
0.1
0.01
0.001
0.0001
H(TO)
HREF
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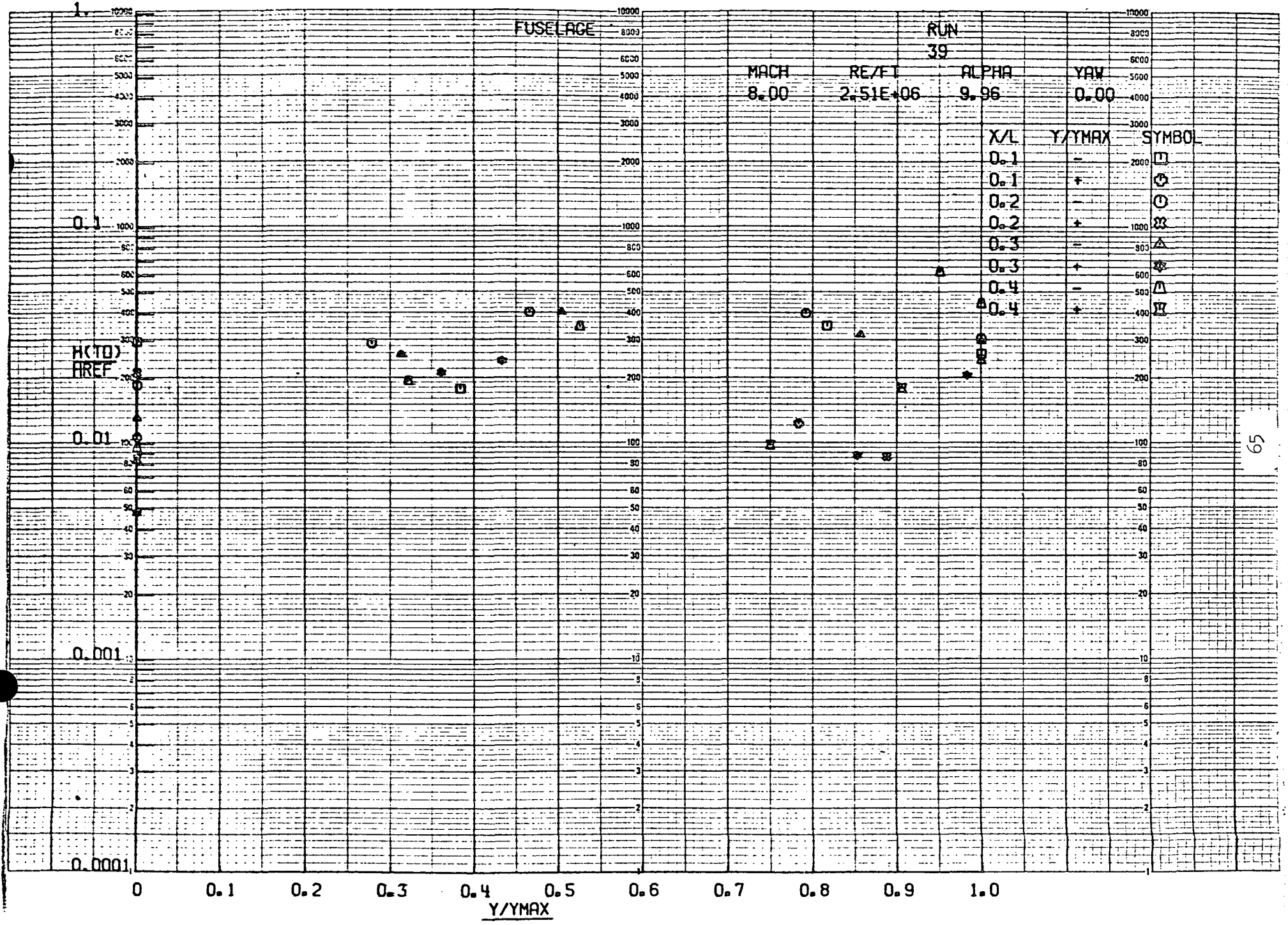
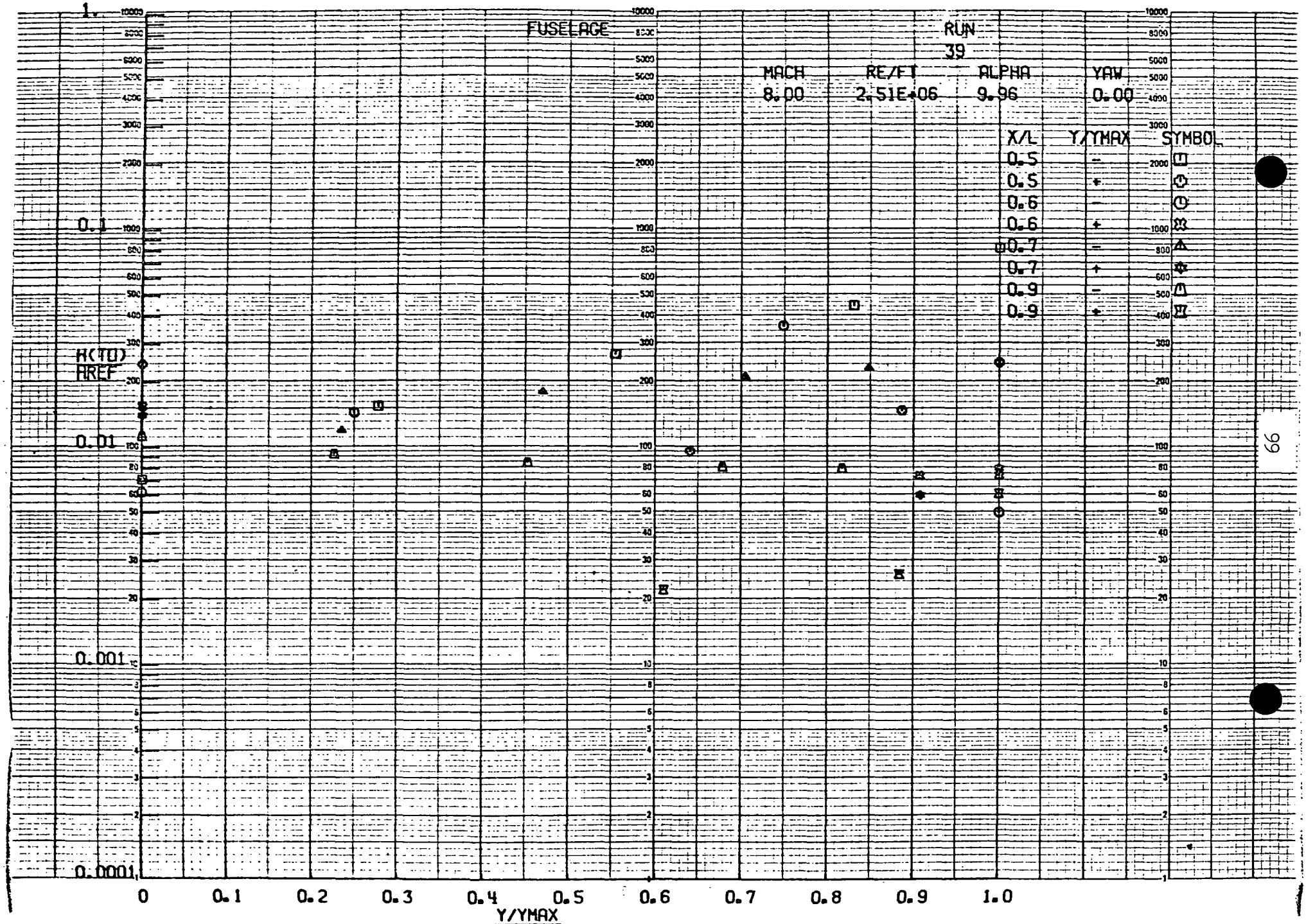
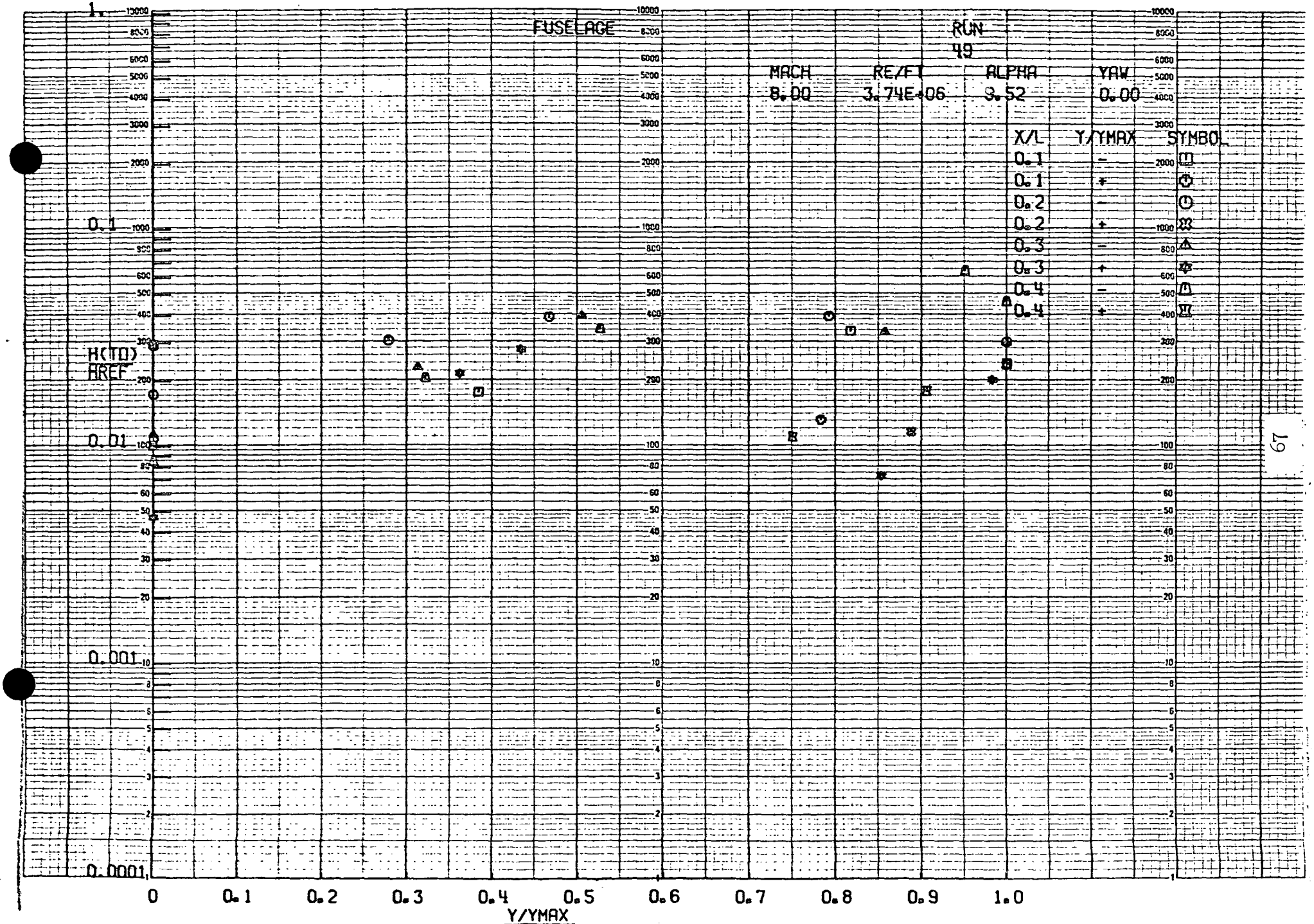
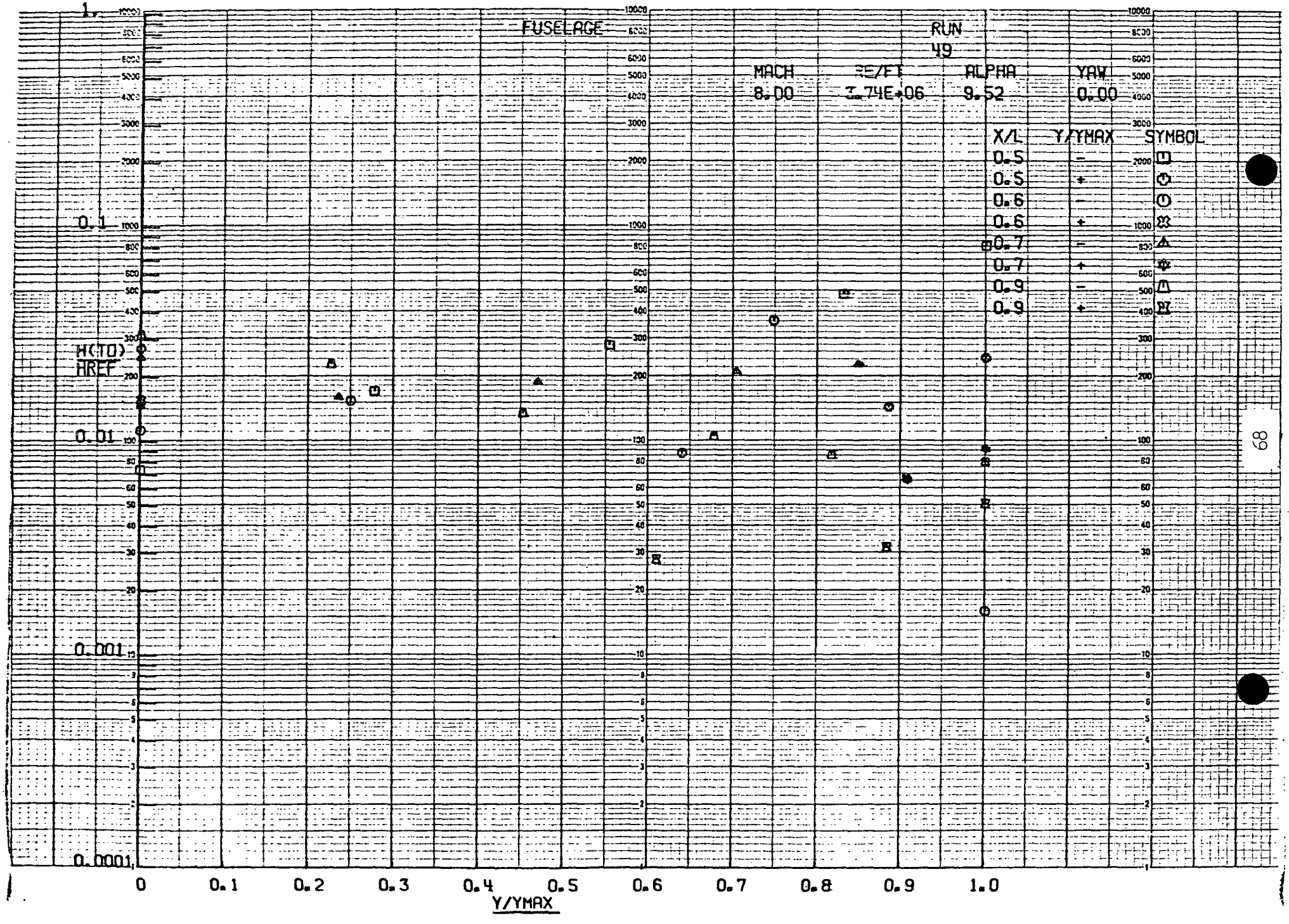
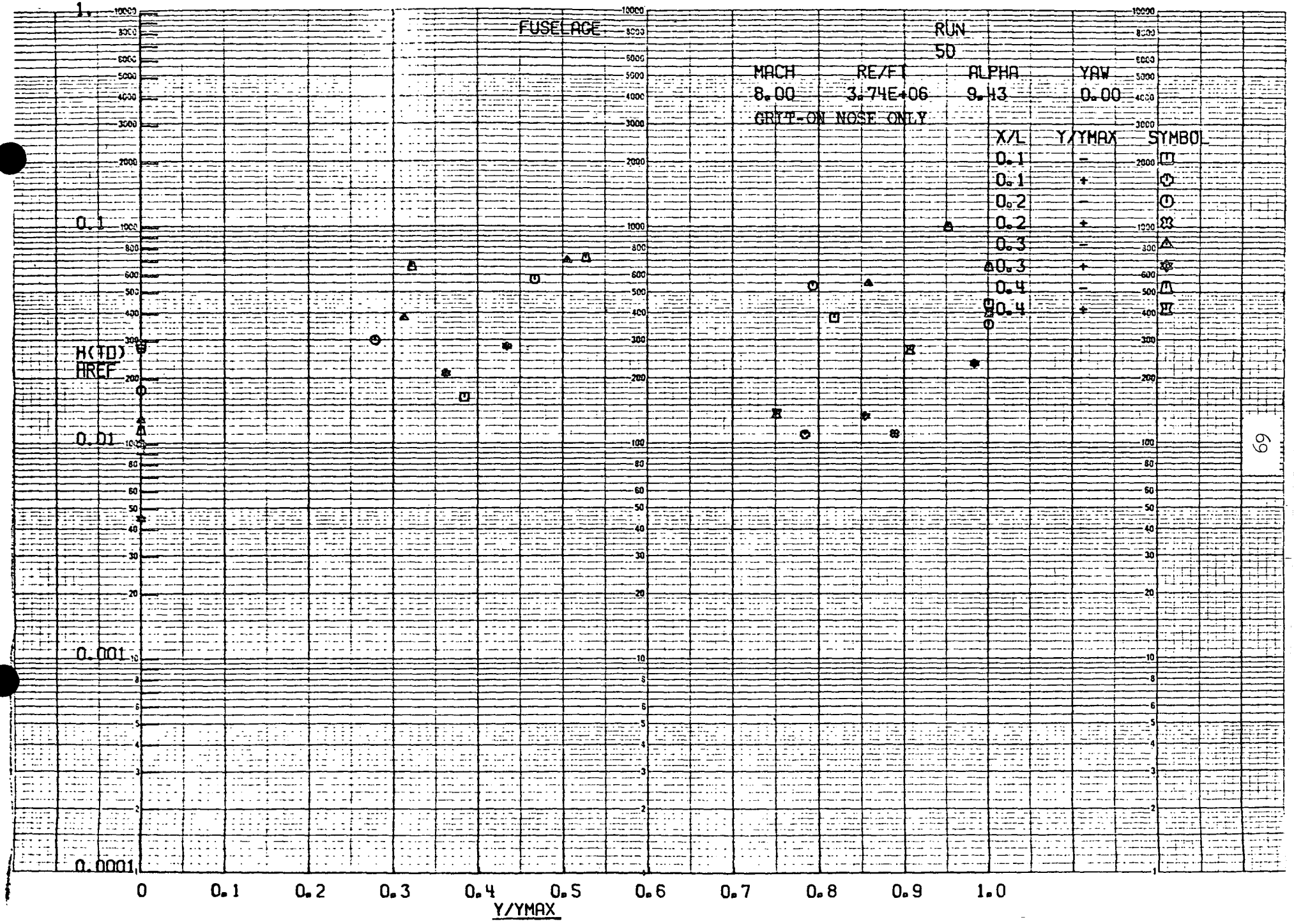
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

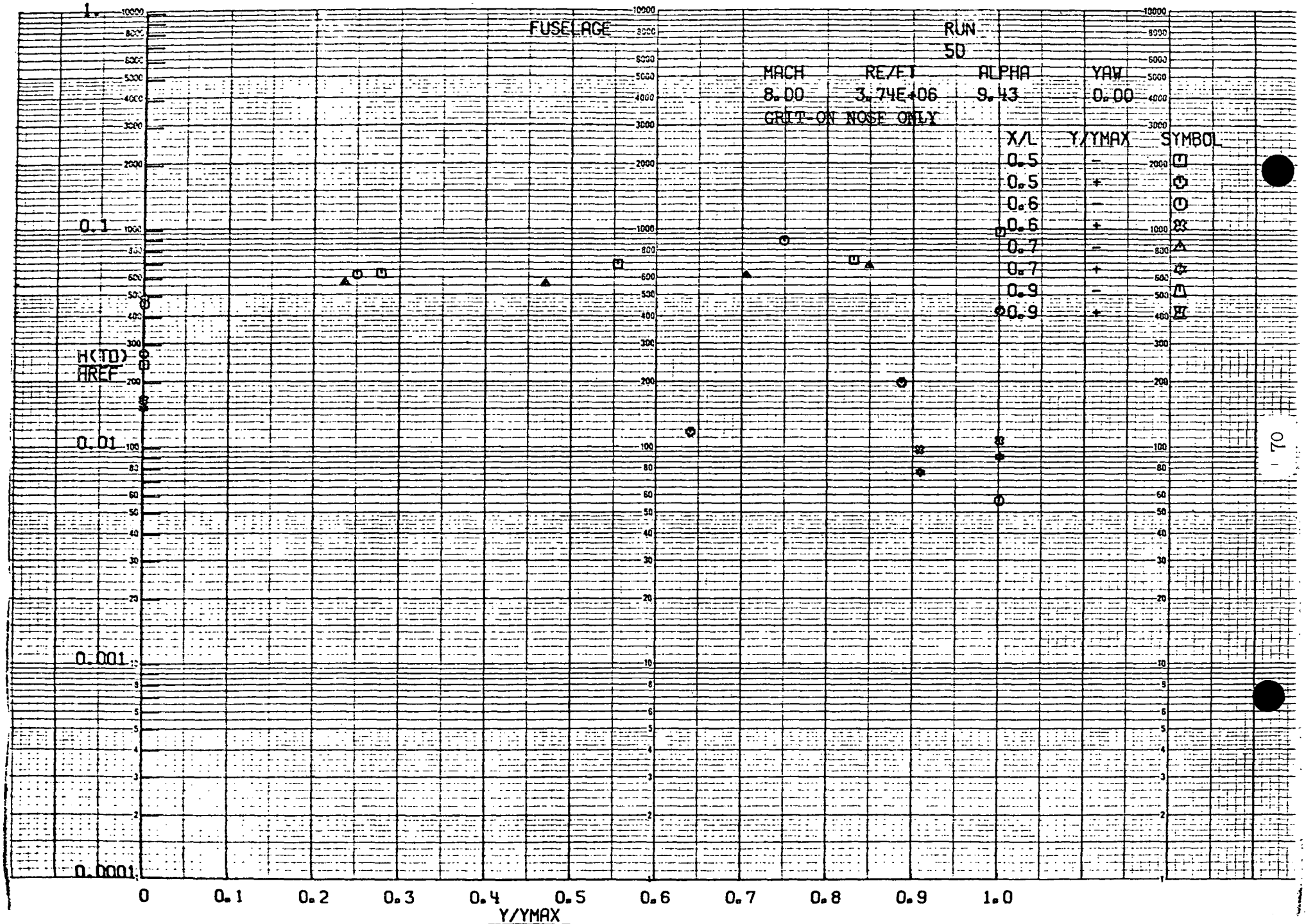

FUSELAGE
RUN
39
MACH
8.00
RE/FT
2.51E+06
ALPHA
9.96
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

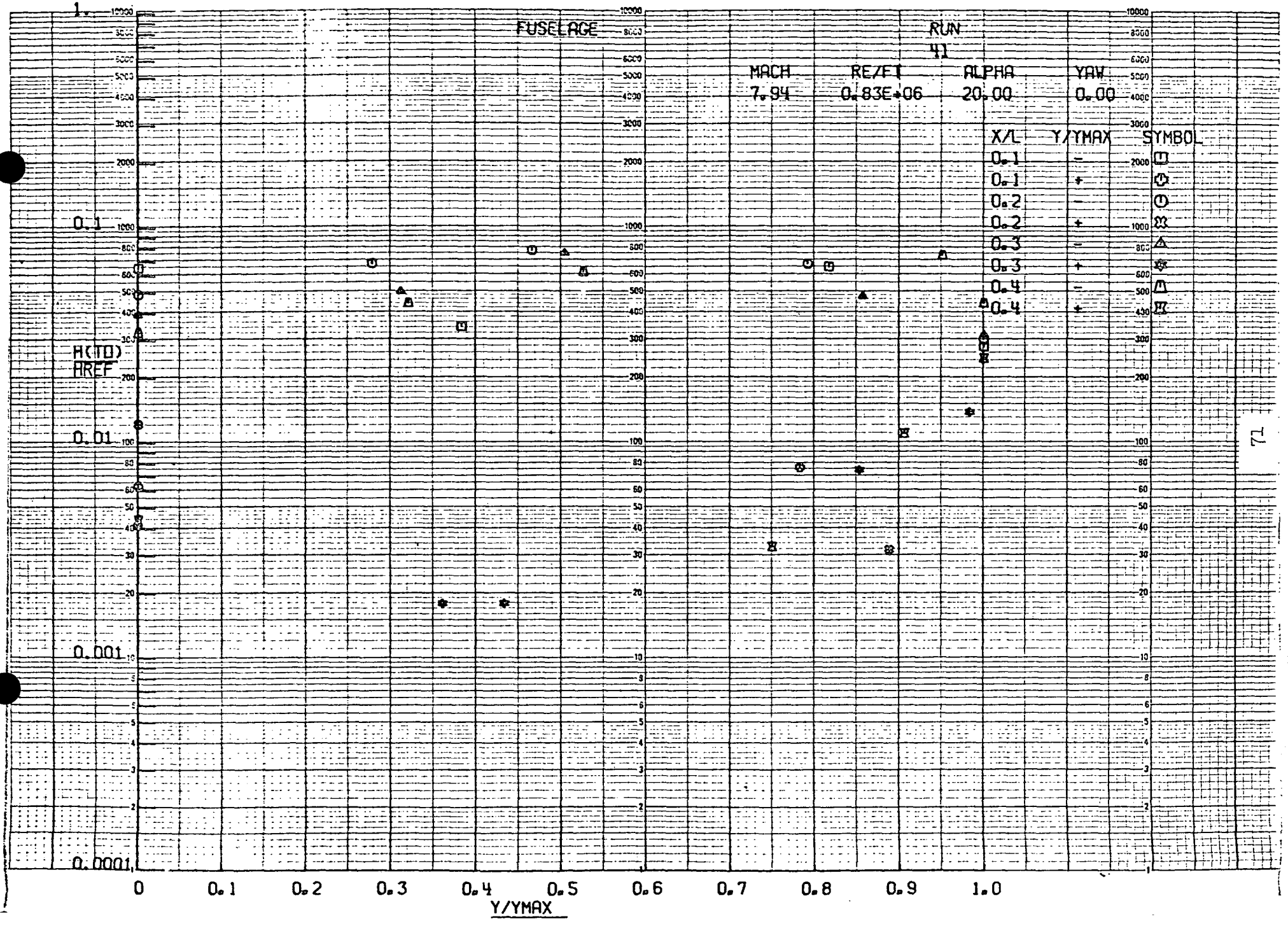

FUSELAGE
RUN
39
MACH
8.00
RE/FT
2.51E+06
ALPHA
9.96
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5
0.5
0.6
0.6
0.7
0.7
0.9
0.9
H(TU)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

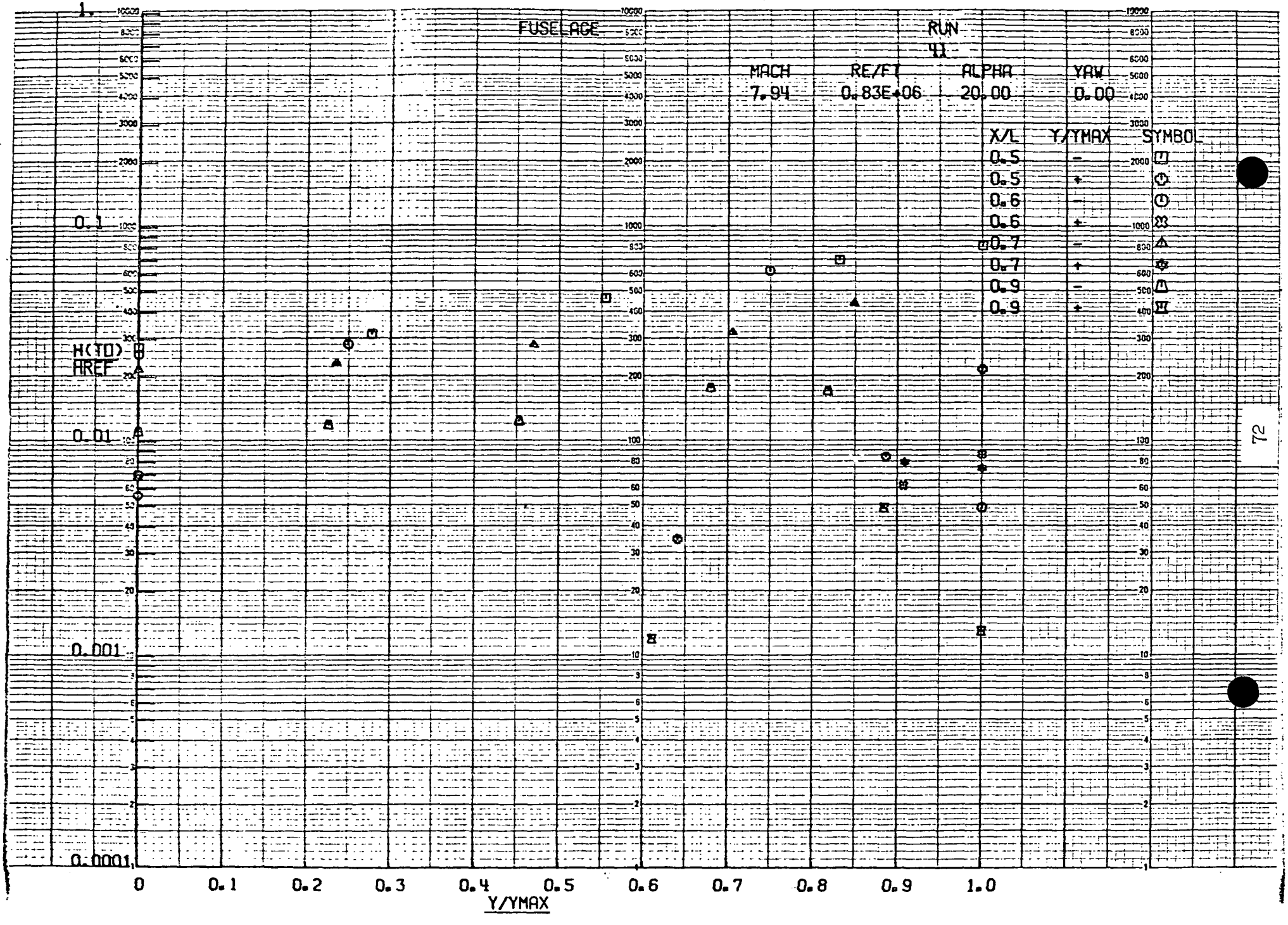

FUSELAGE
RUN
49
MACH
8.00
RE/FT
3.74E+06
ALPHA
3.52
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
H(TD)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

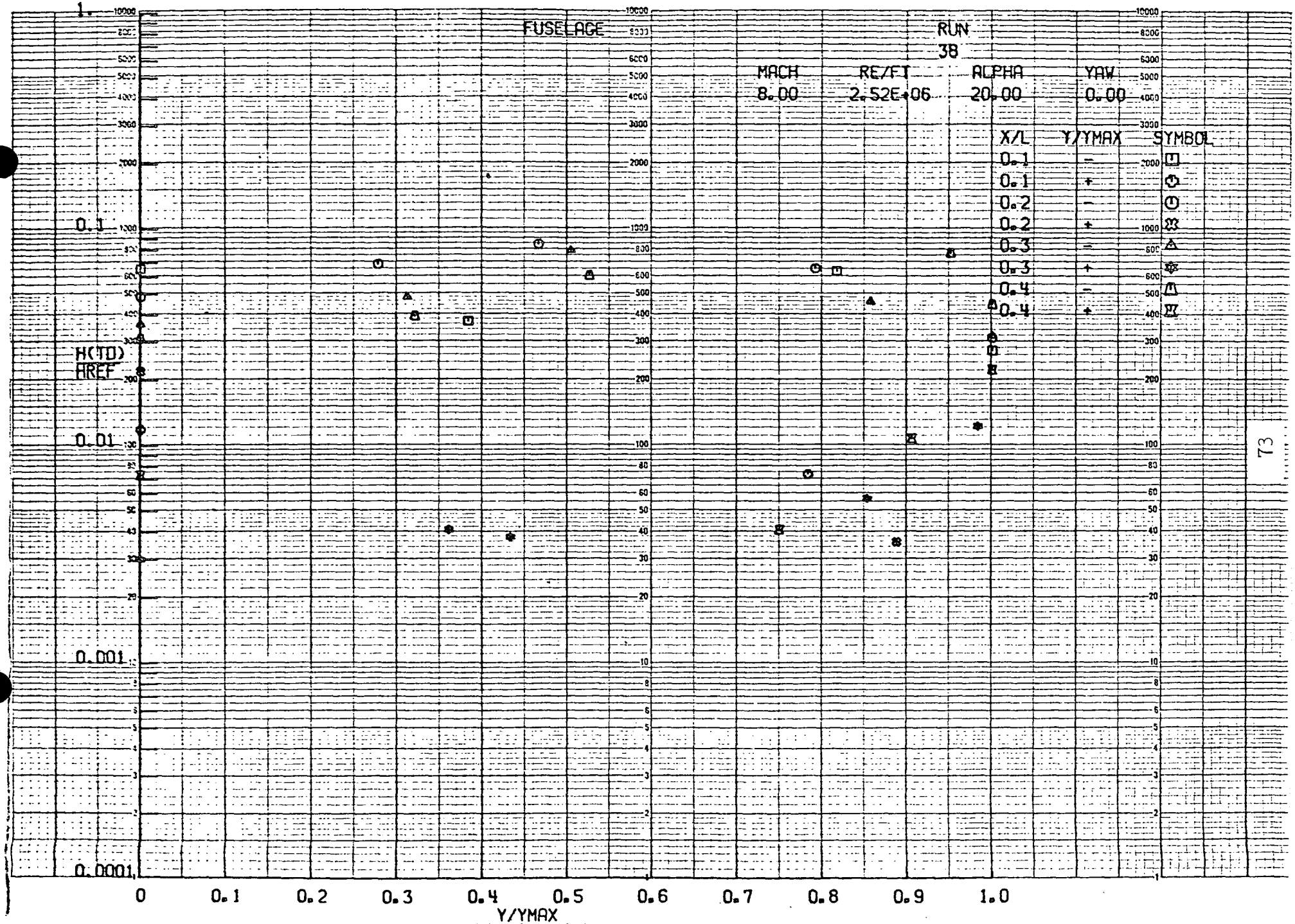

FUSELAGE
RUN
49
MACH
8.00
RE/FT
3.74E+06
ALPHA
9.52
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 -
0.5 +
0.6 -
0.6 +
0.7 -
0.7 +
0.9 -
0.9 +
1.
0.1
0.01
0.001
0.0001
H(TO)
HREF
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

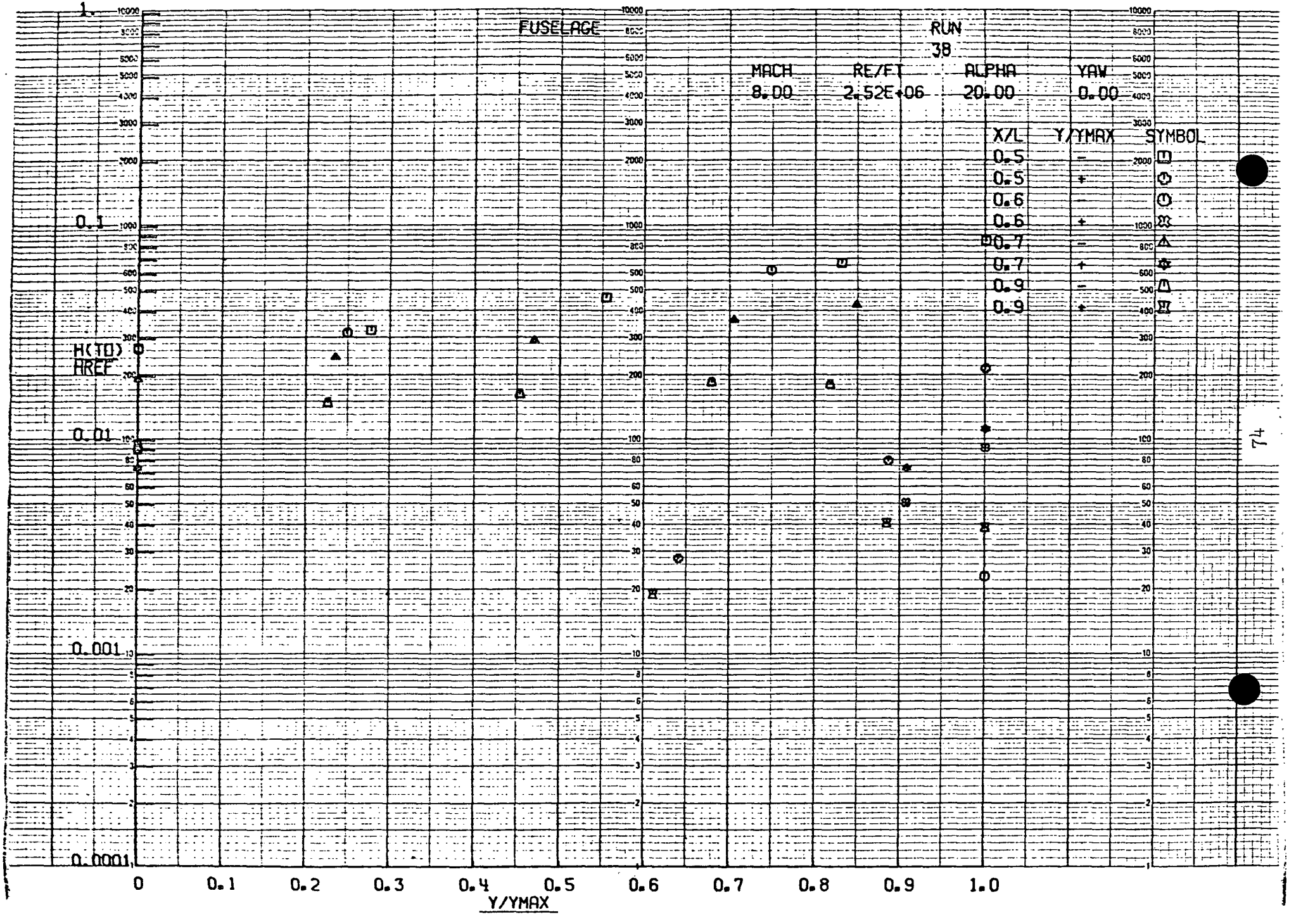

FUSELAGE
RUN
50
MACH
8.00
RE/FT
3.74E+06
ALPHA
9.43
YAW
0.00
GRIT-ON NOSE ONLY
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
H(TD)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

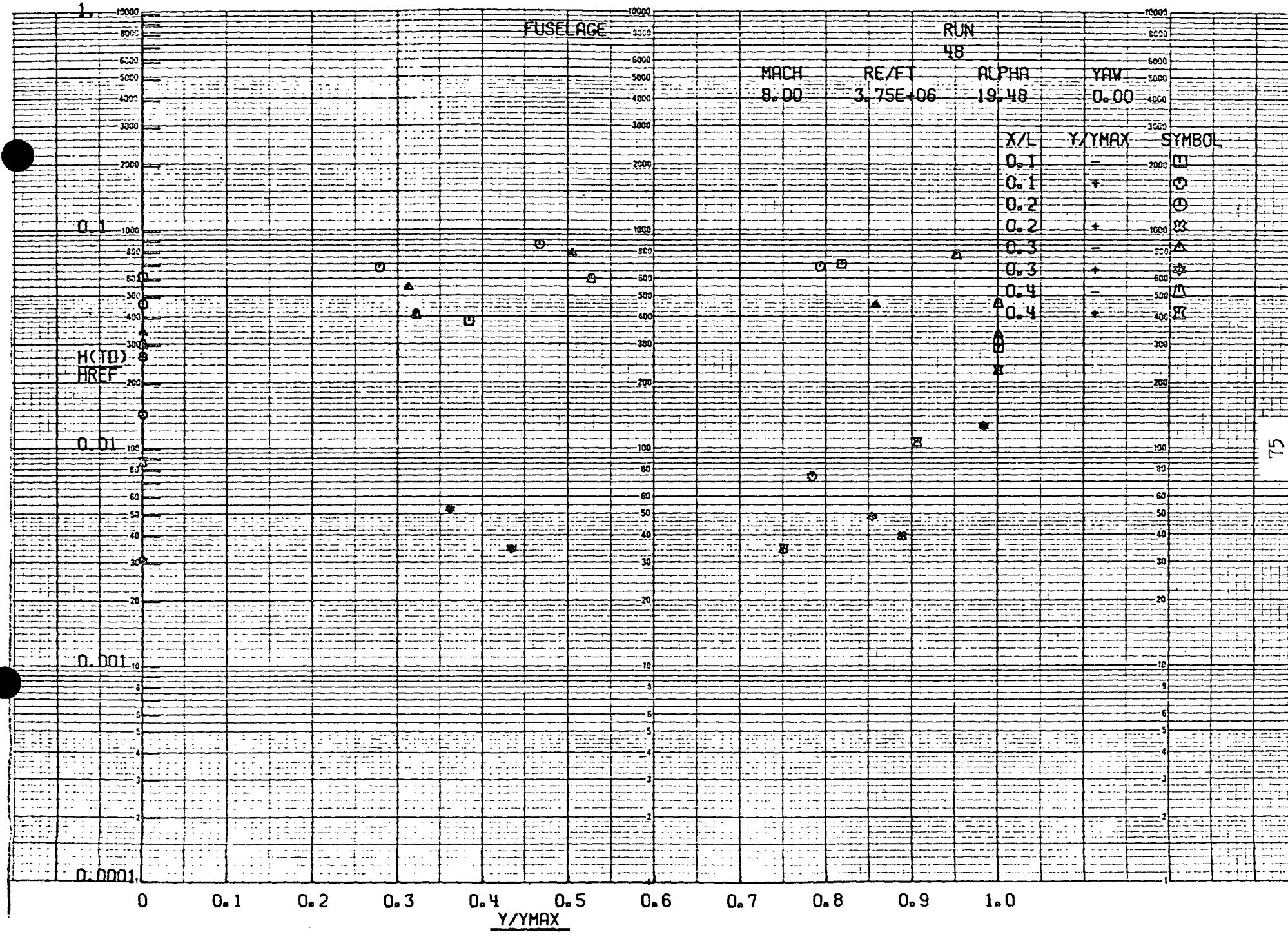

FUSELAGE
RUN
50
MACH
8.00
RE/FT
3.74E+06
ALPHA
9.43
YAW
0.00
GRIT-ON NOSE ONLY
X/L
Y/YMAX
SYMBOL
0.5 −
0.5 +
0.6 −
0.6 +
0.7 −
0.7 +
0.9 −
0.9 +
H(TO)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

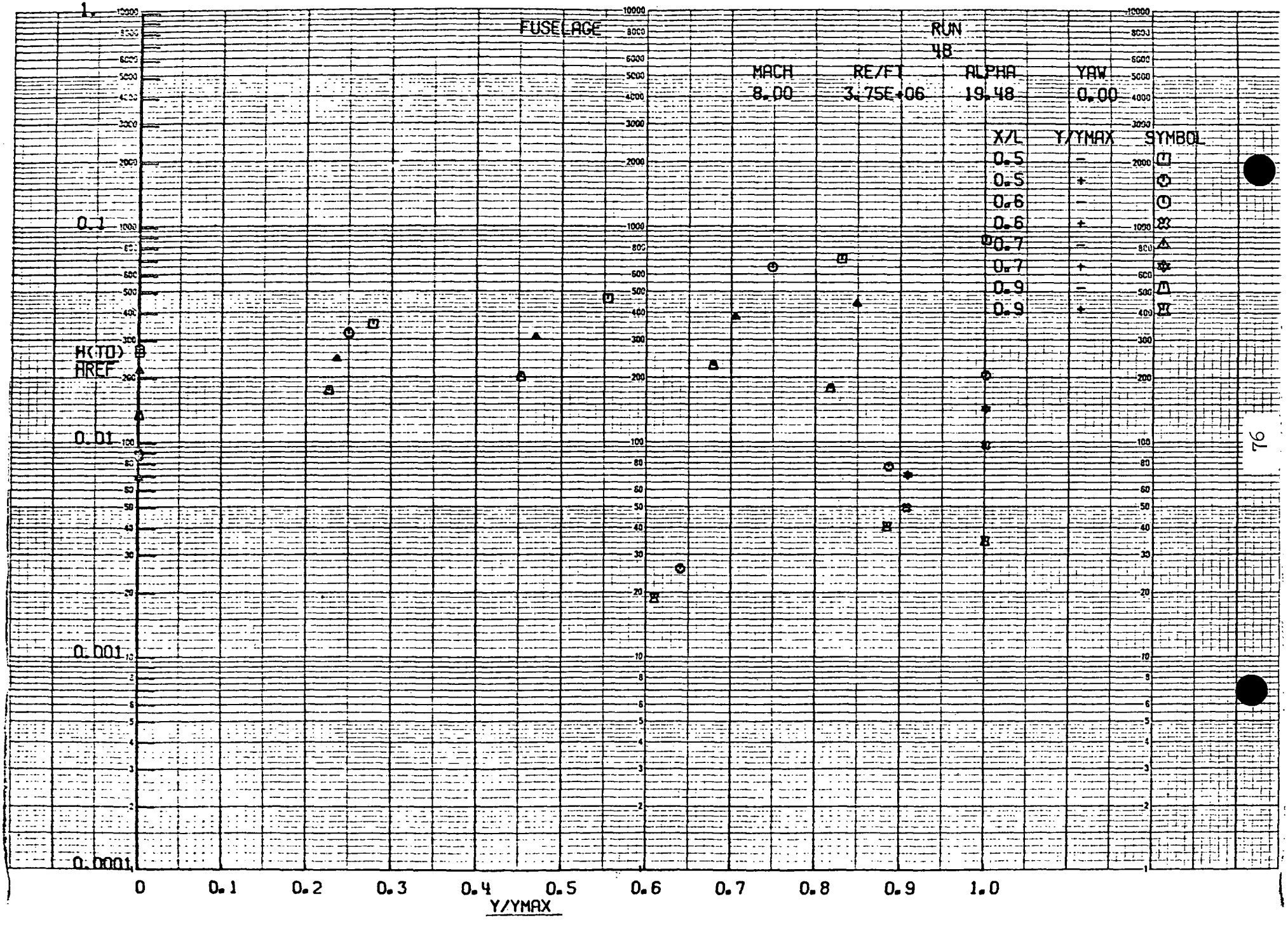

FUSELAGE
RUN
41
MACH
7.94
RE/FT
0.83E+06
ALPHA
20.00
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

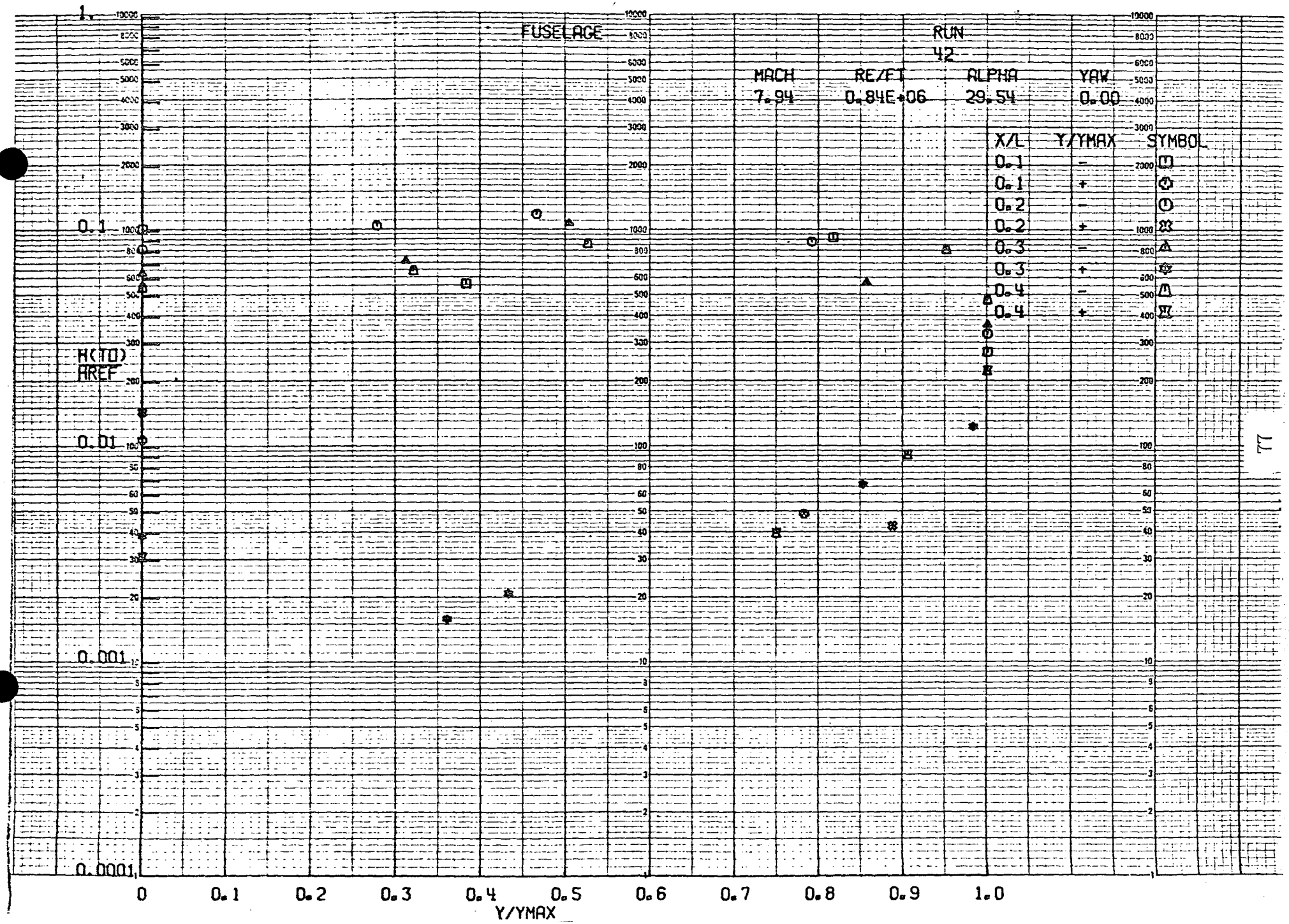

FUSELAGE
RUN
41
MACH
7.94
RE/FT
0.83E+06
ALPHA
20.00
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 –
0.5 +
0.6 –
0.6 +
0.7 –
0.7 +
0.9 –
0.9 +
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

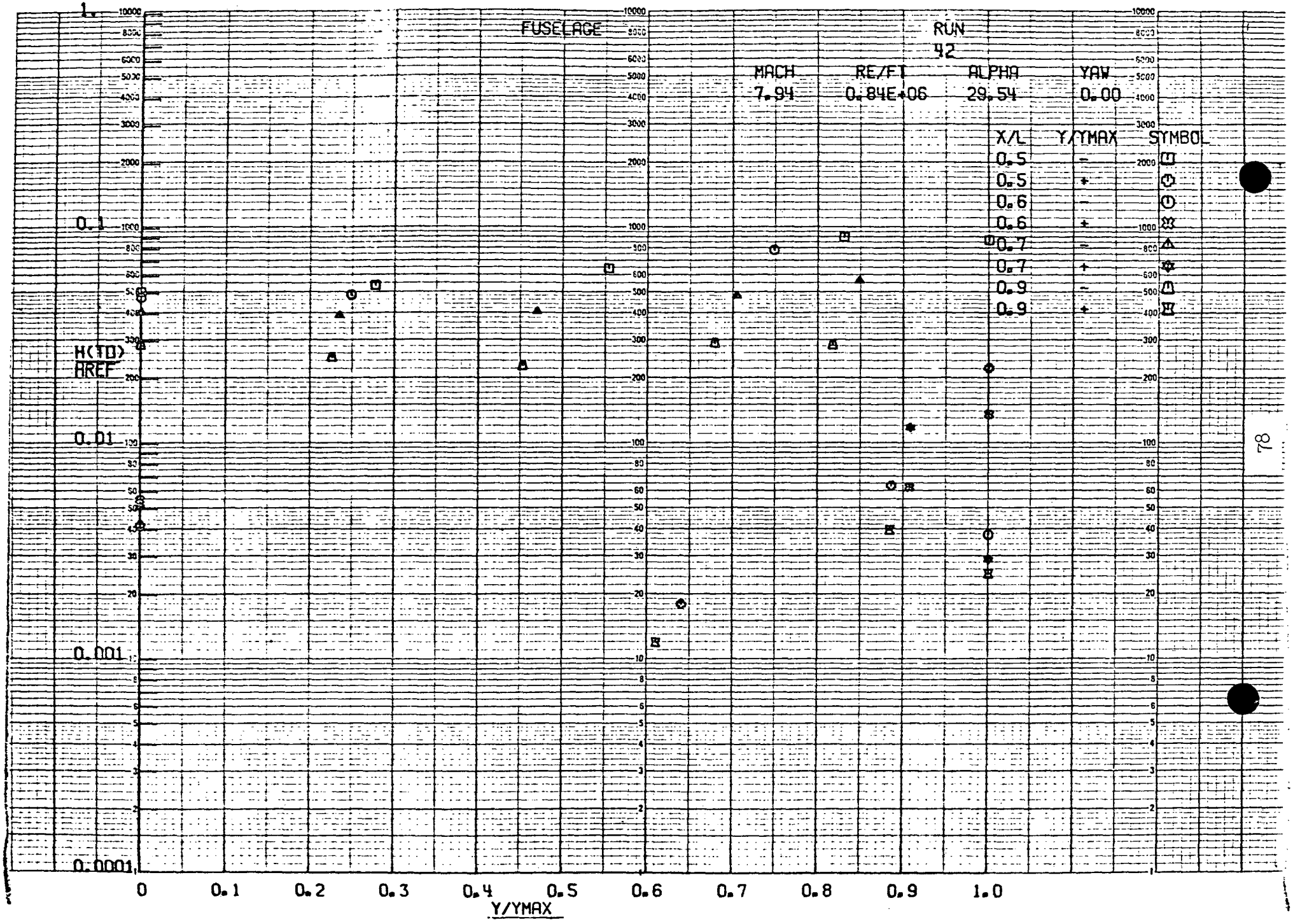

FUSELAGE
RUN
38
MACH
8.00
RE/FT
2.52E+06
ALPHA
20.00
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
H(TD)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX
73

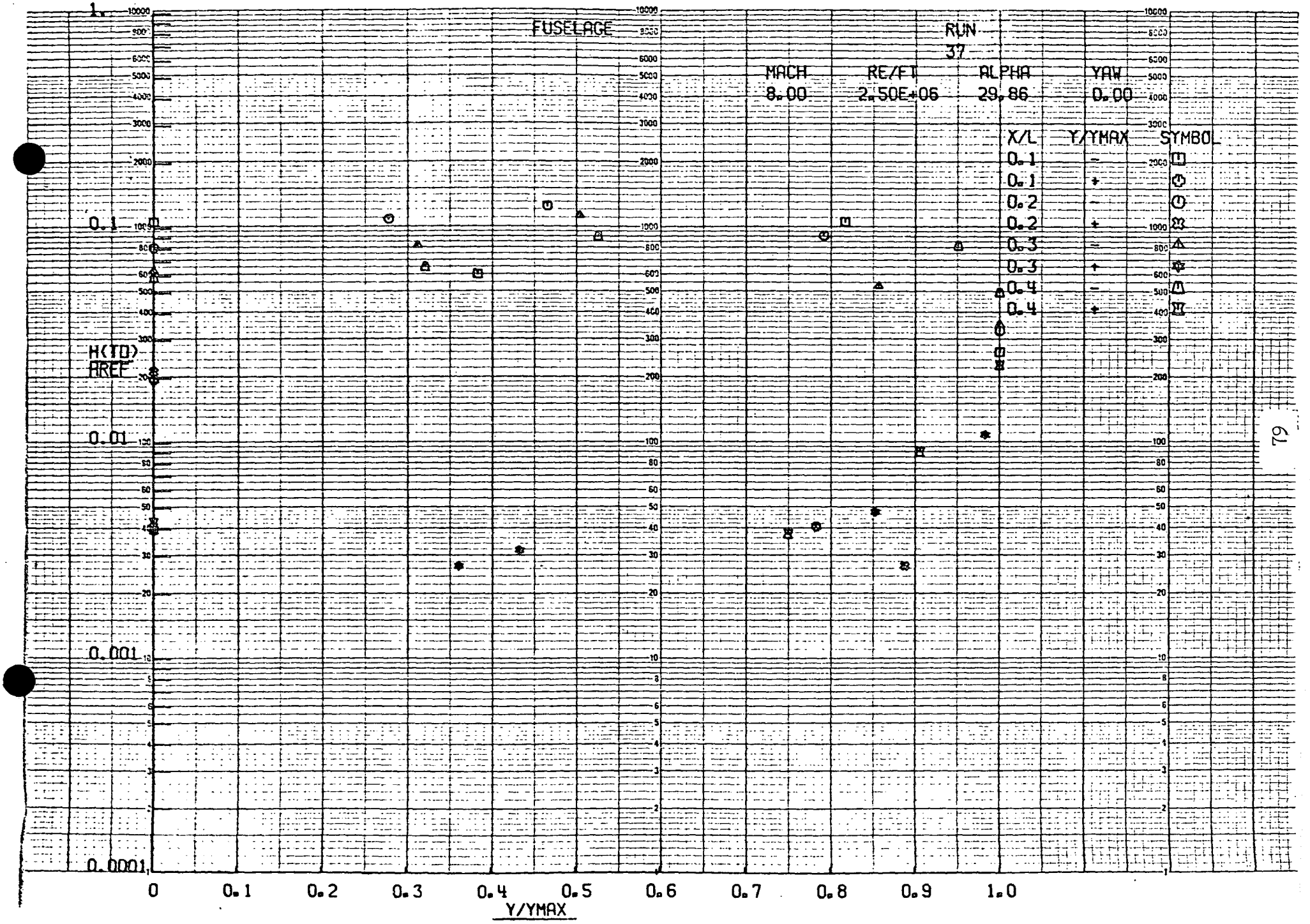

FUSELAGE
RUN
38
MACH
8.00
RE/FT
2.52E+06
ALPHA
20.00
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 -
0.5 +
0.6 -
0.6 +
0.7 -
0.7 +
0.9 -
0.9 +
H(TO)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

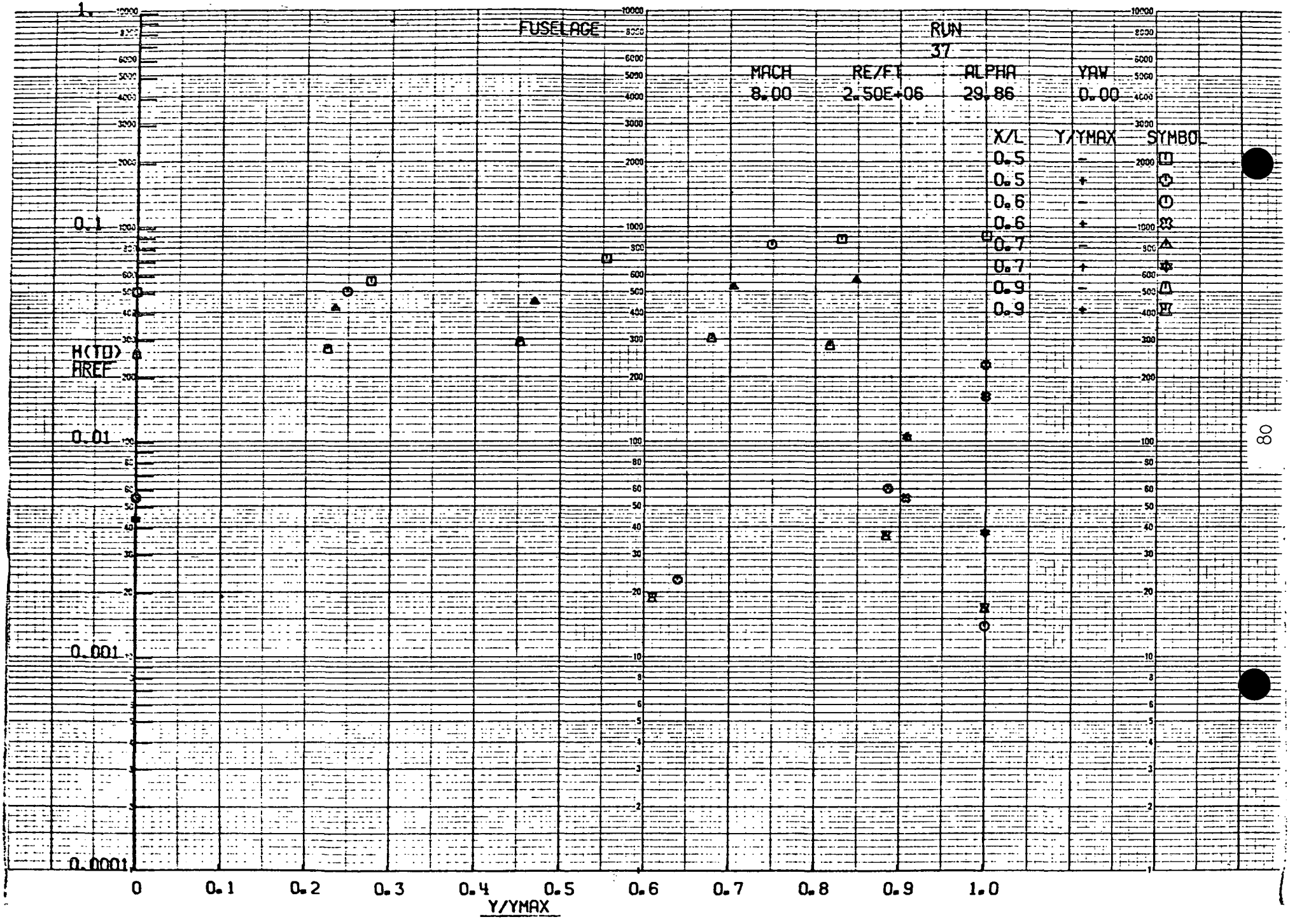

1.
FUSELAGE
RUN
48
MACH
8.00
RE/FT
3.75E+06
ALPHA
19.48
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1
0.1
0.2
0.2
0.3
0.3
0.4
0.4
H(TO)
HREF
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

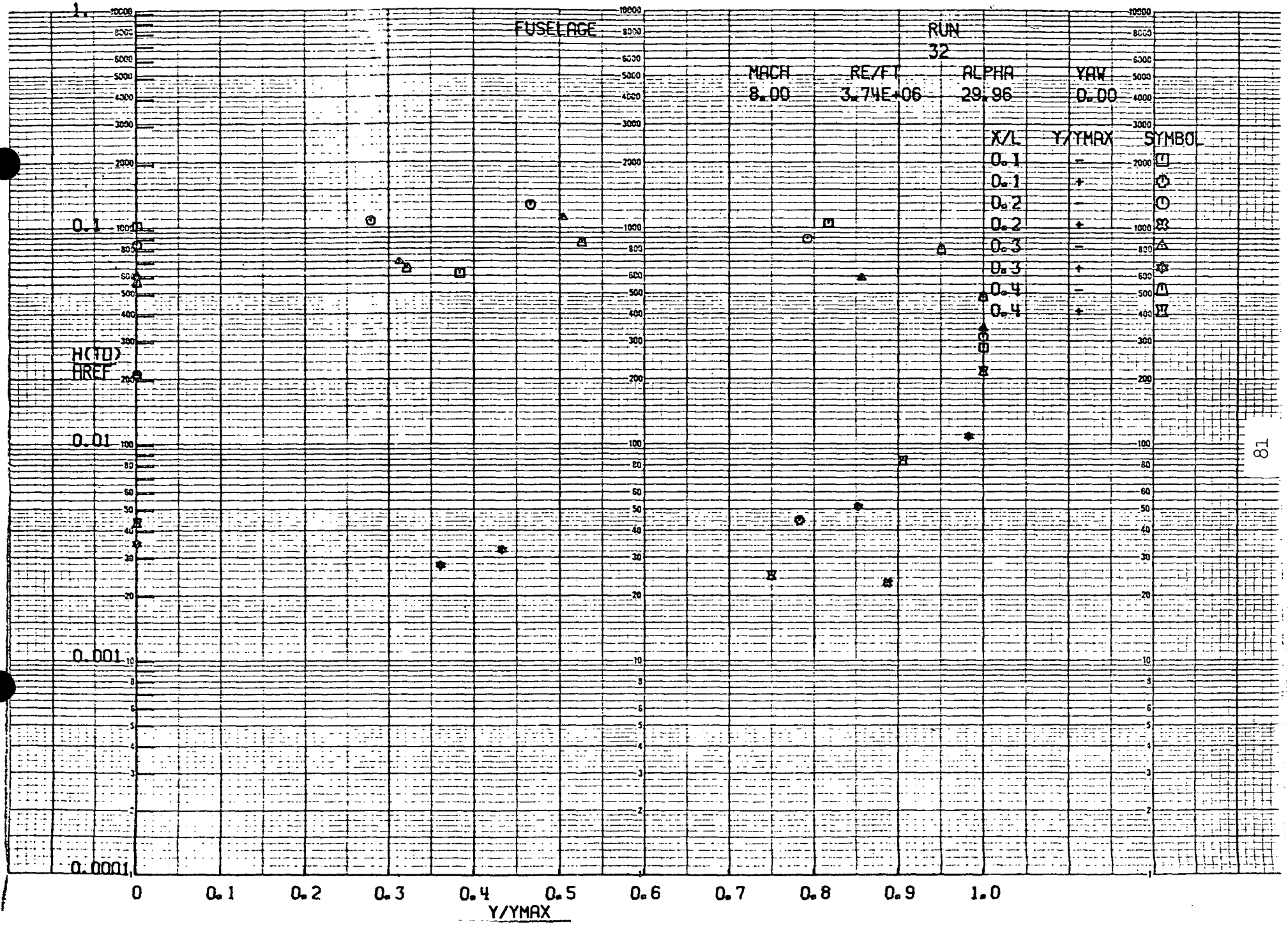

FUSELAGE
RUN
48
MACH
8.00
RE/FT
3.75E+06
ALPHA
19.48
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 –
0.5 +
0.6 –
0.6 +
0.7 –
0.7 +
0.9 –
0.9 +
1.
0.1
0.01
0.001
0.0001
H(TO)
HREF
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

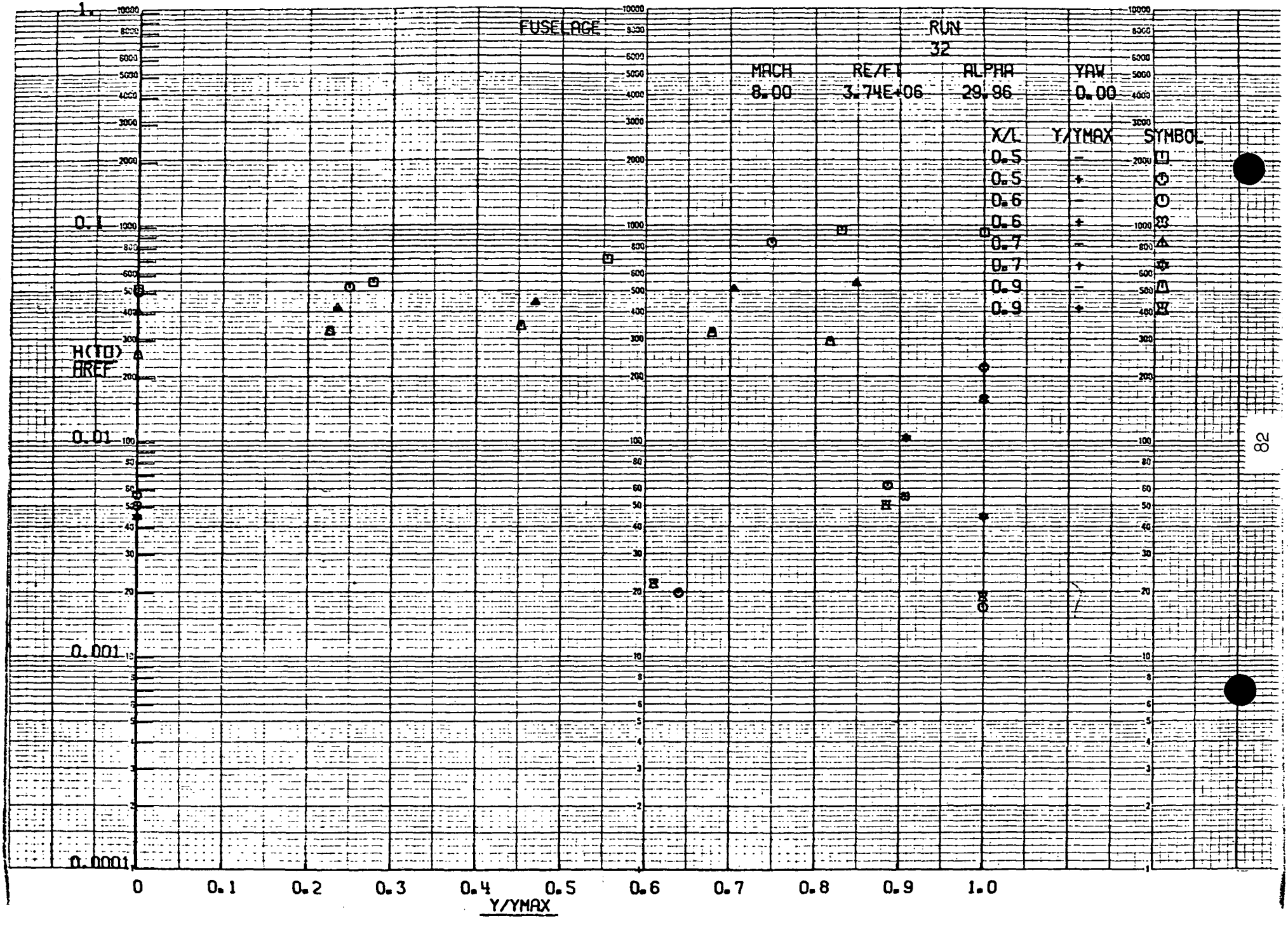

FUSELAGE
RUN
42
MACH
7.94
RE/FT
0.84E+06
ALPHA
29.54
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

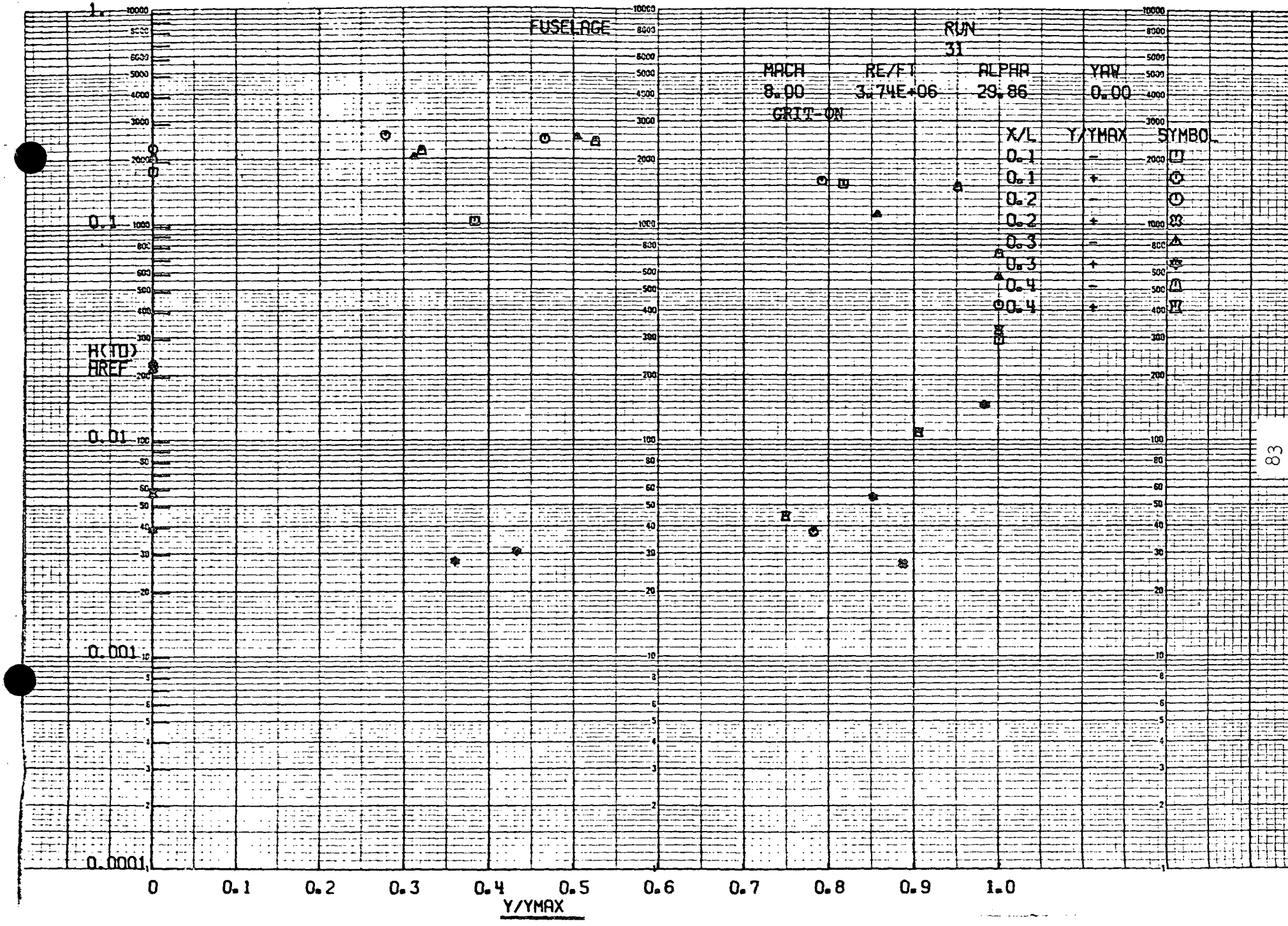

FUSELAGE
RUN
42
MACH
7.94
RE/FT
0.84E+06
ALPHA
29.54
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 −
0.5 +
0.6 −
0.6 +
0.7 −
0.7 +
0.9 −
0.9 +
H(TO)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

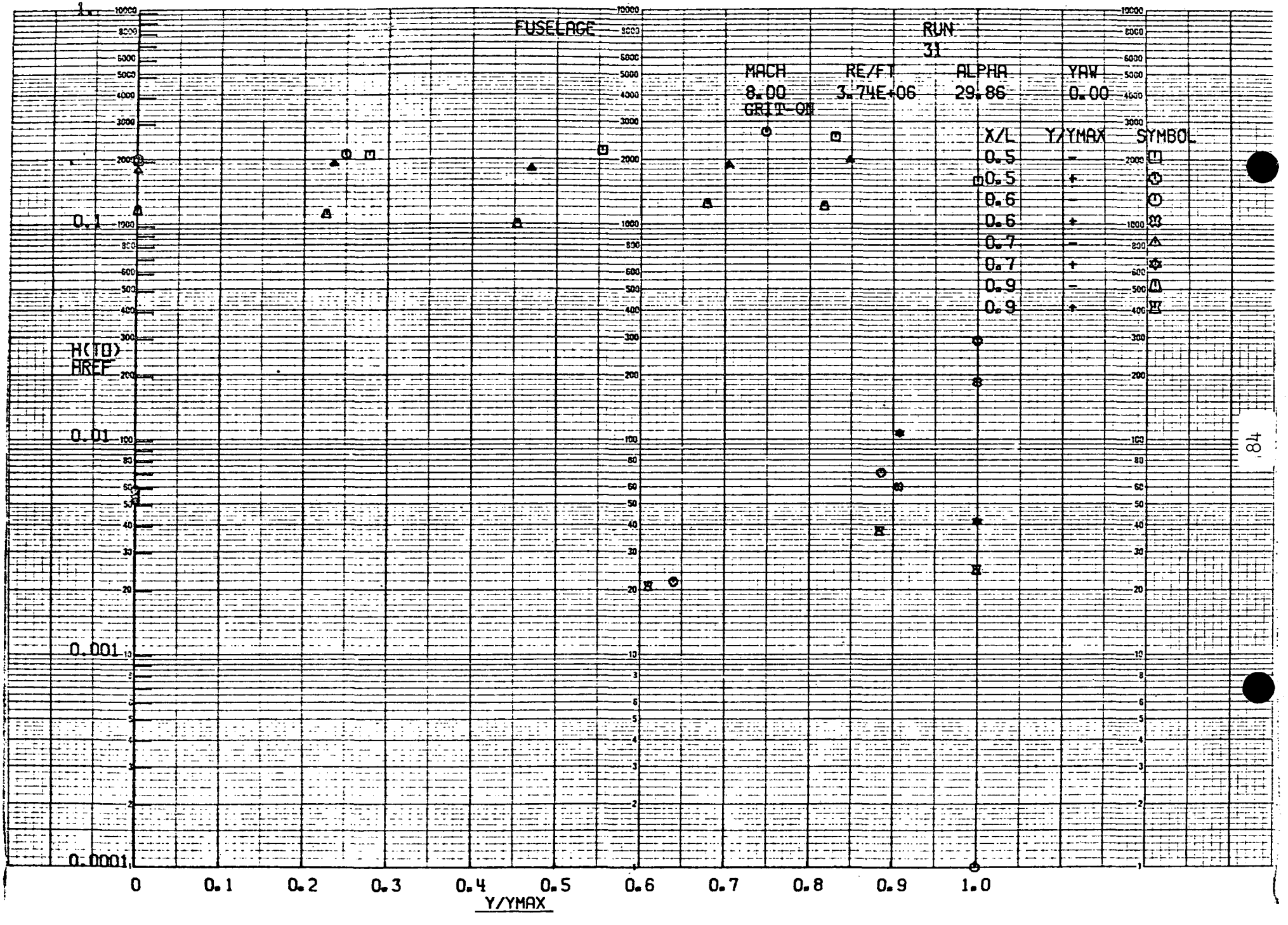

FUSELAGE
RUN
37
MACH
8.00
RE/FT
2.50E+06
ALPHA
29.86
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 –
0.1 +
0.2 –
0.2 +
0.3 –
0.3 +
0.4 –
0.4 +
H(TD)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

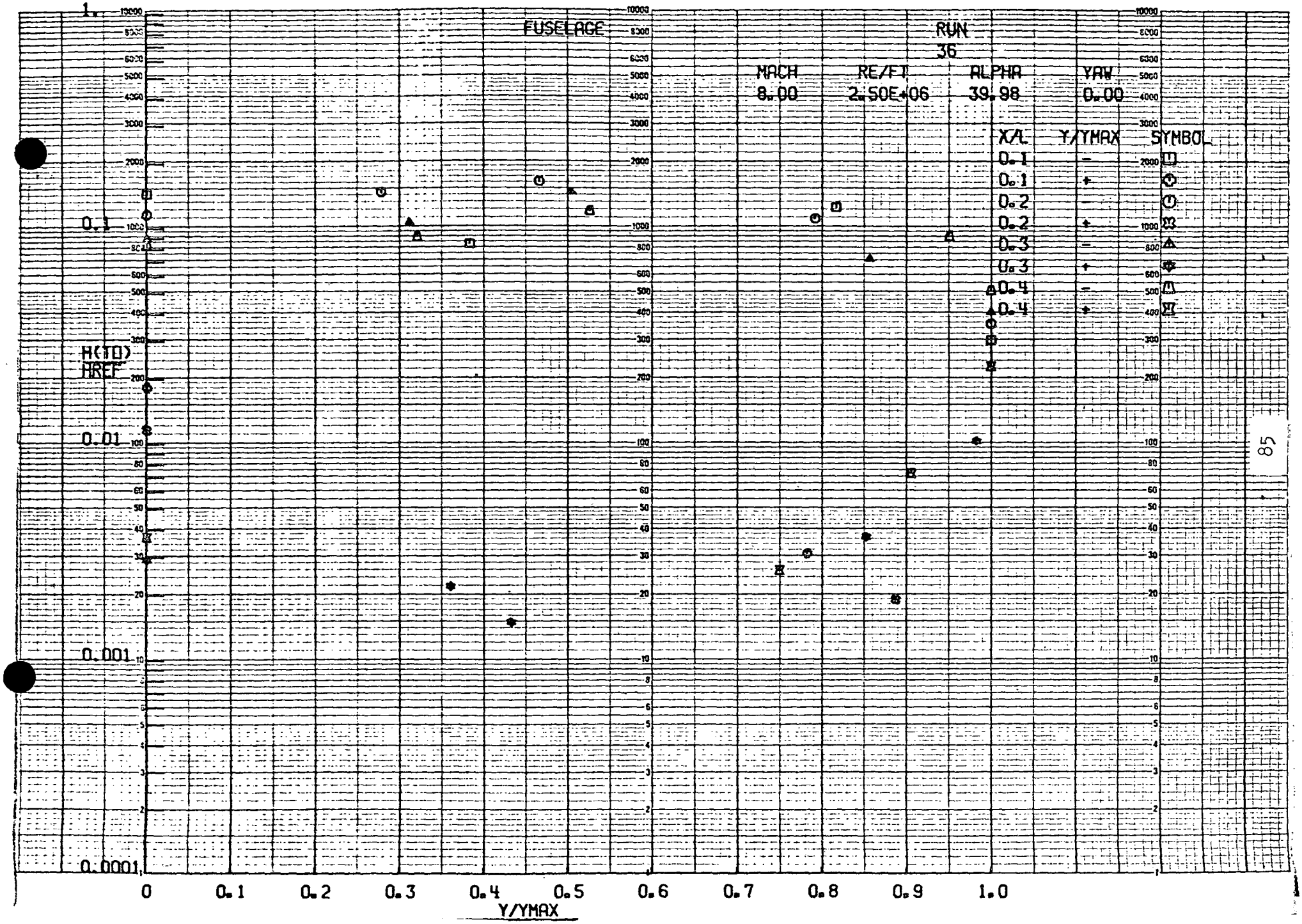

FUSELAGE
RUN
37
MACH
8.00
RE/FT
2.50E+06
ALPHA
29.86
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 –
0.5 +
0.6 –
0.6 +
0.7 –
0.7 +
0.9 –
0.9 +
H(TO)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

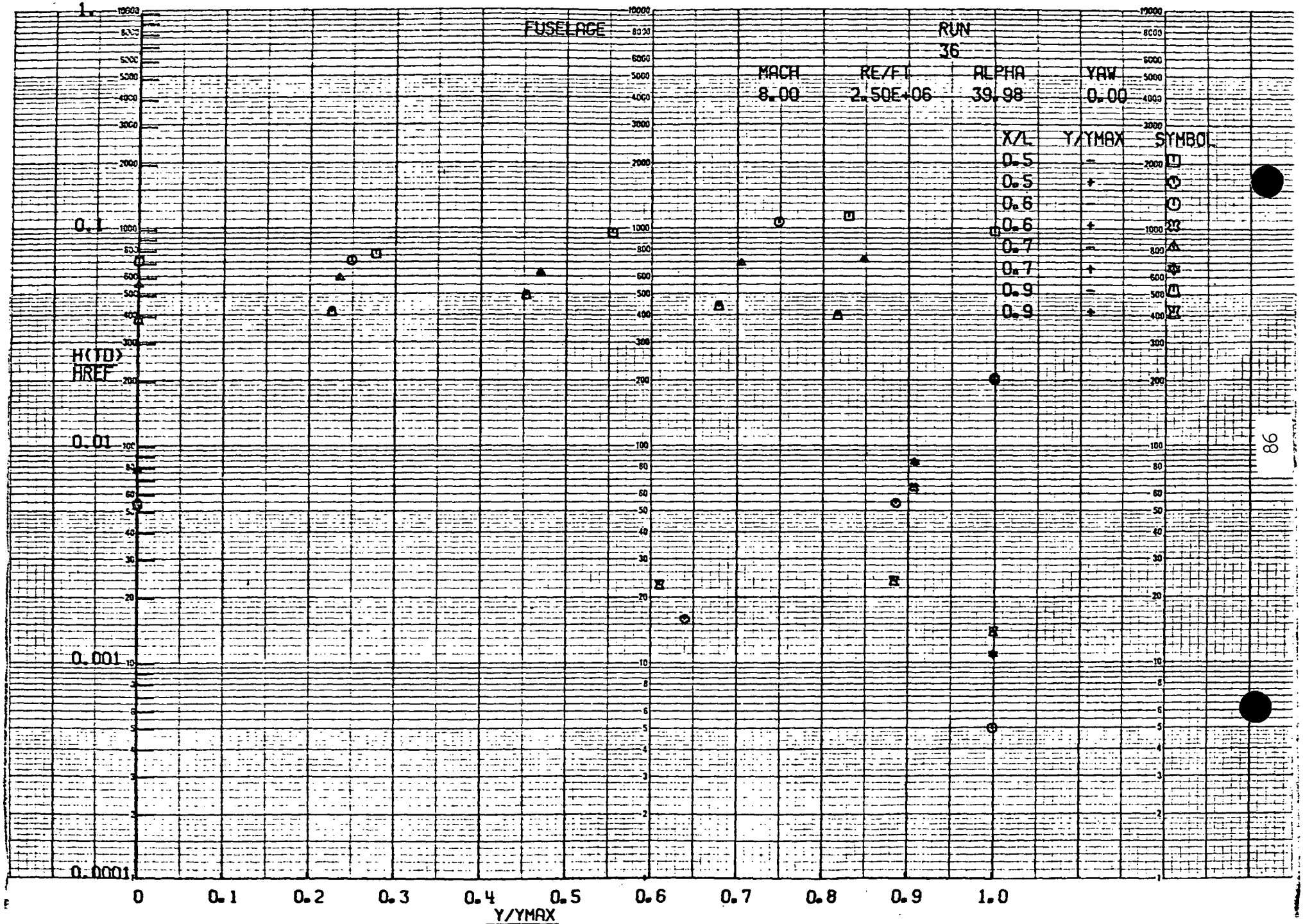

FUSELAGE
RUN
32
MACH
8.00
RE/FT
3.74E+06
ALPHA
29.96
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
32
MACH
8.00
RE/FT
3.74E+06
ALPHA
29.96
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 –
0.5 +
0.6 –
0.6 +
0.7 –
0.7 +
0.9 –
0.9 +
1.
0.1
0.01
0.001
0.0001
H(TO)
AREF
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
31
MACH
8.00
RE/FT
3.74E+06
ALPHA
29.86
YAW
0.00
GRIT-ON
X/L
Y/YMAX
SYMBOL
0.1
-
0.1
+
0.2
-
0.2
+
0.3
-
0.3
+
0.4
-
0.4
+
H(TD)
HREF
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
31
MACH
8.00
RE/FT
3.74E+06
ALPHA
29.86
YAW
0.00
GRIT-ON
X/L
Y/YMAX
SYMBOL
0.5 -
0.5 +
0.6 -
0.6 +
0.7 -
0.7 +
0.9 -
0.9 +
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
36
MACH
8.00
RE/FT
2.50E+06
ALPHA
39.98
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 –
0.1 +
0.2 –
0.2 +
0.3 –
0.3 +
0.4 –
0.4 +
H(TD)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
36
MACH
8.00
RE/FT
2.50E+06
ALPHA
39.98
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5
0.5
0.6
0.6
0.7
0.7
0.9
0.9
H(TD)
HREF
1.
0.1
0.01
0.001
0.0001
0
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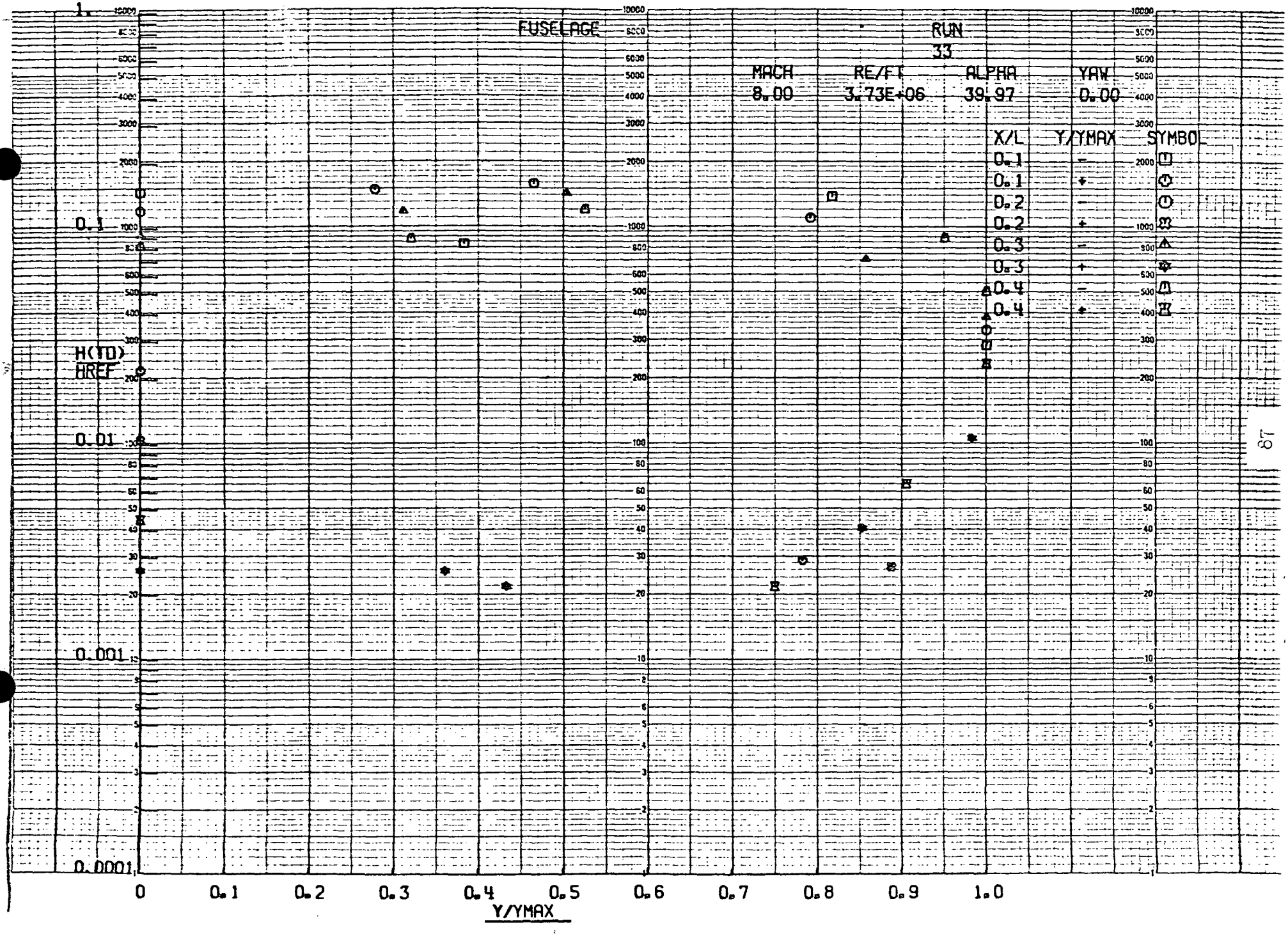
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX


FUSELAGE
RUN
33
MACH
8.00
RE/FT
3.73E+06
ALPHA
39.97
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 –
0.1 +
0.2 –
0.2 +
0.3 –
0.3 +
0.4 –
0.4 +
H(TD)
HREF
0.1
0.01
0.001
0.0001
0
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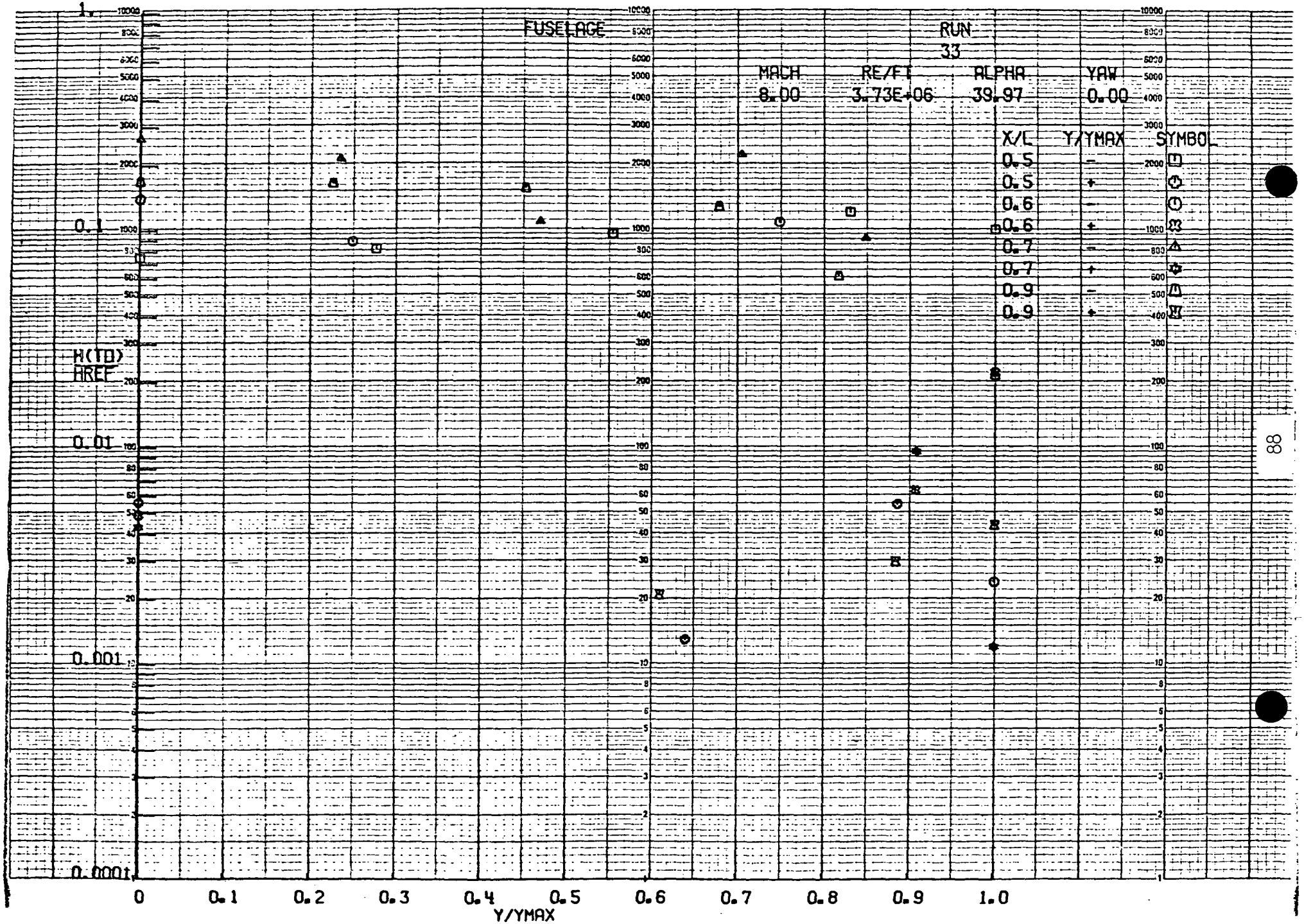
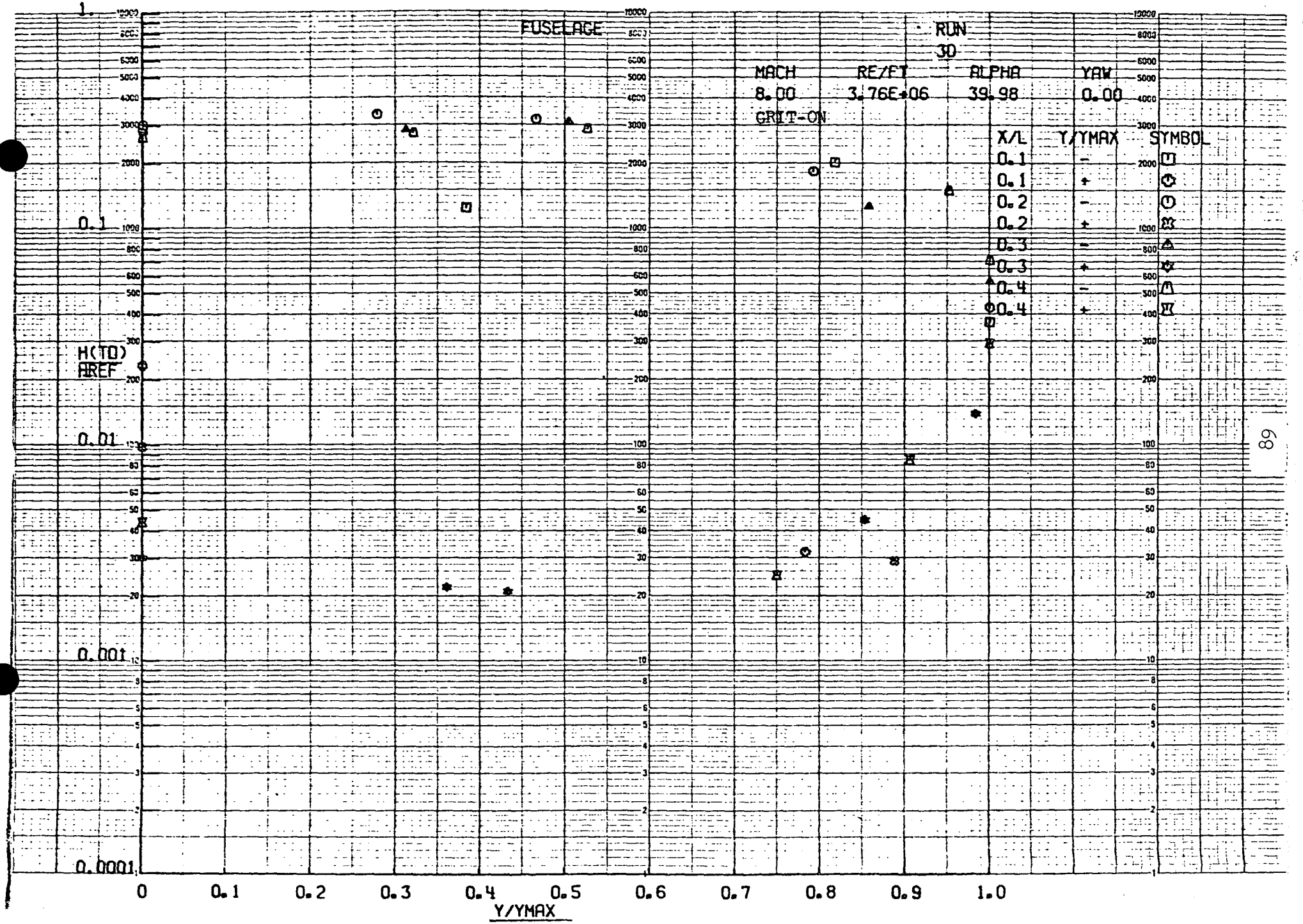
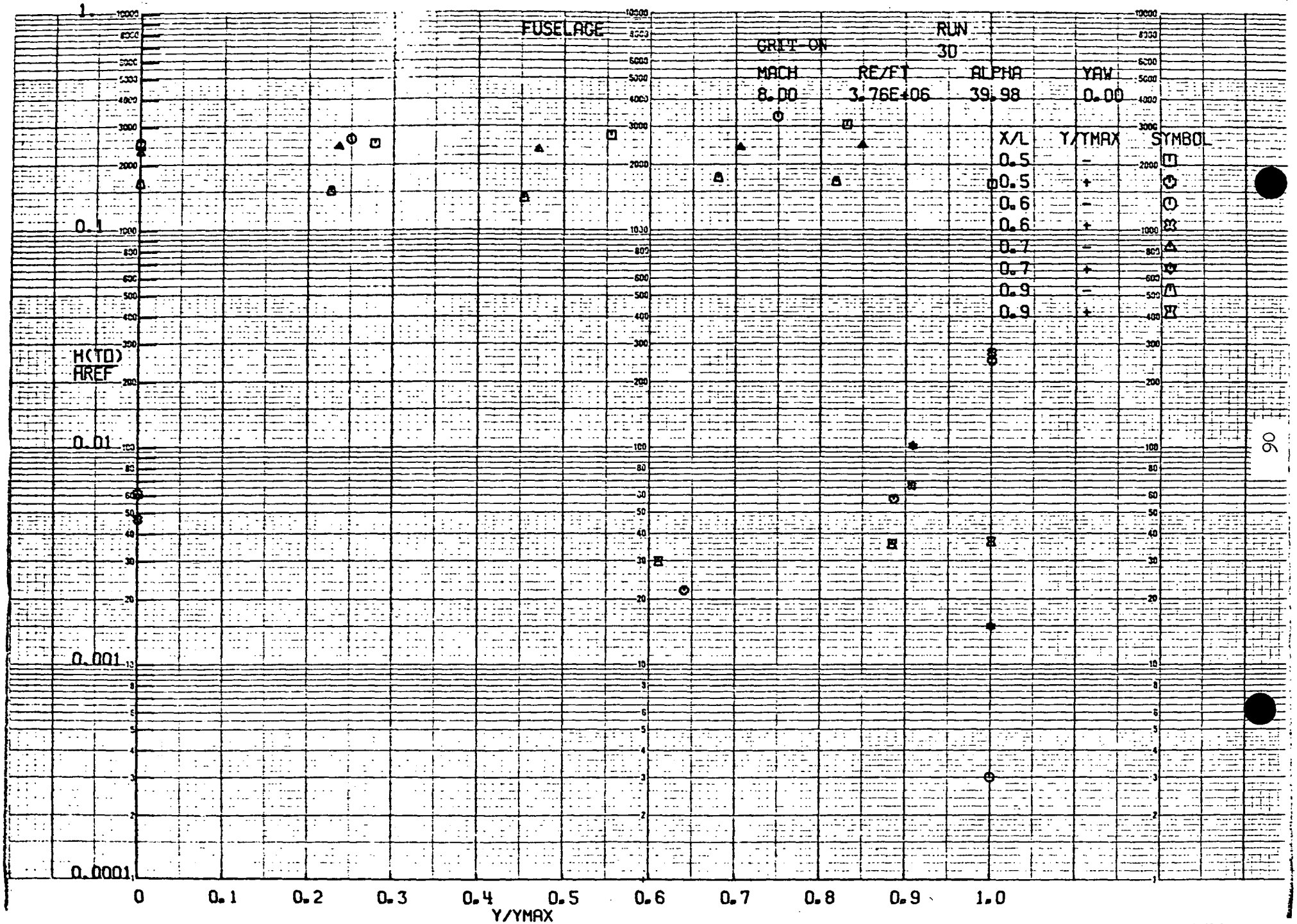
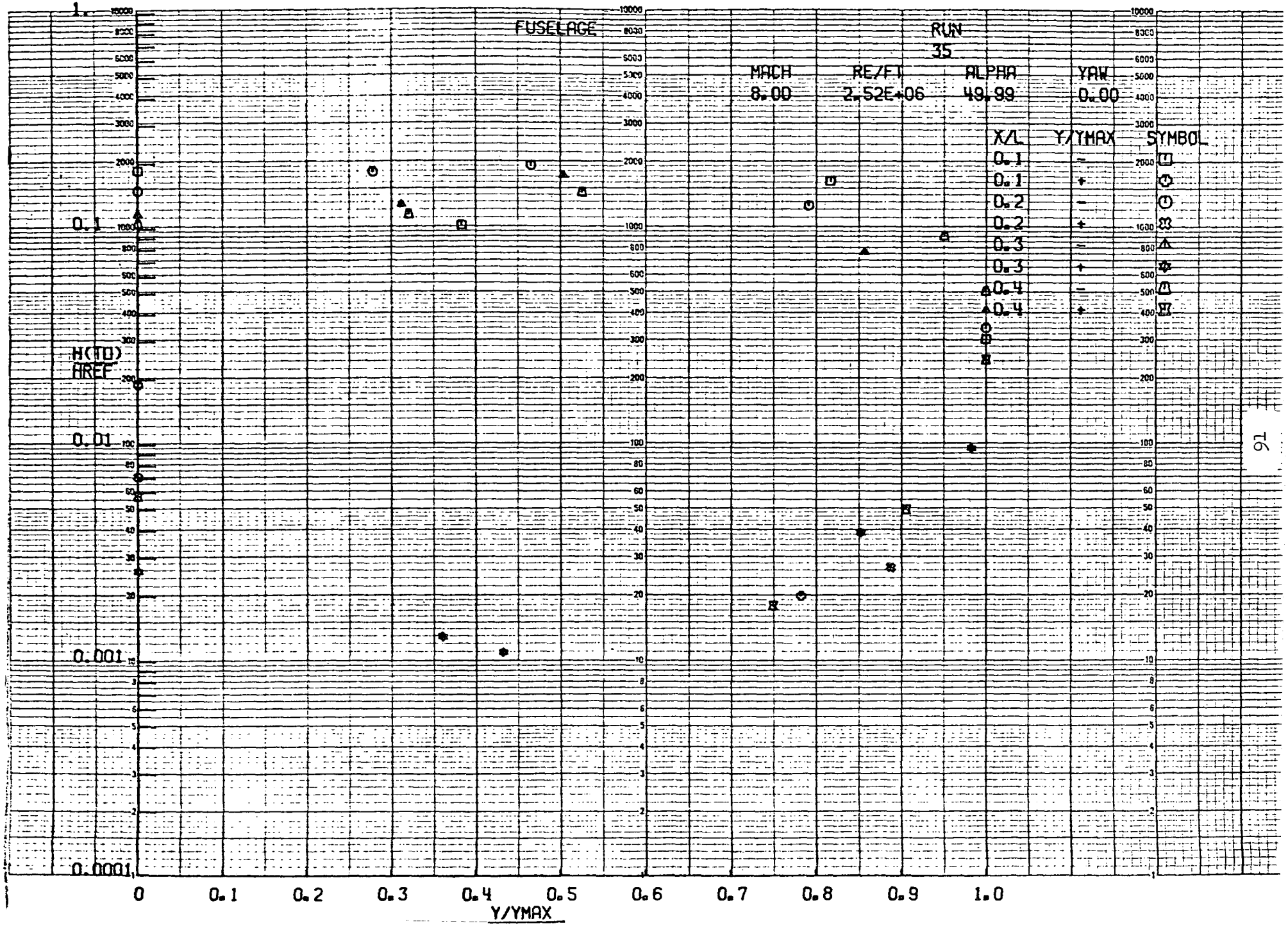
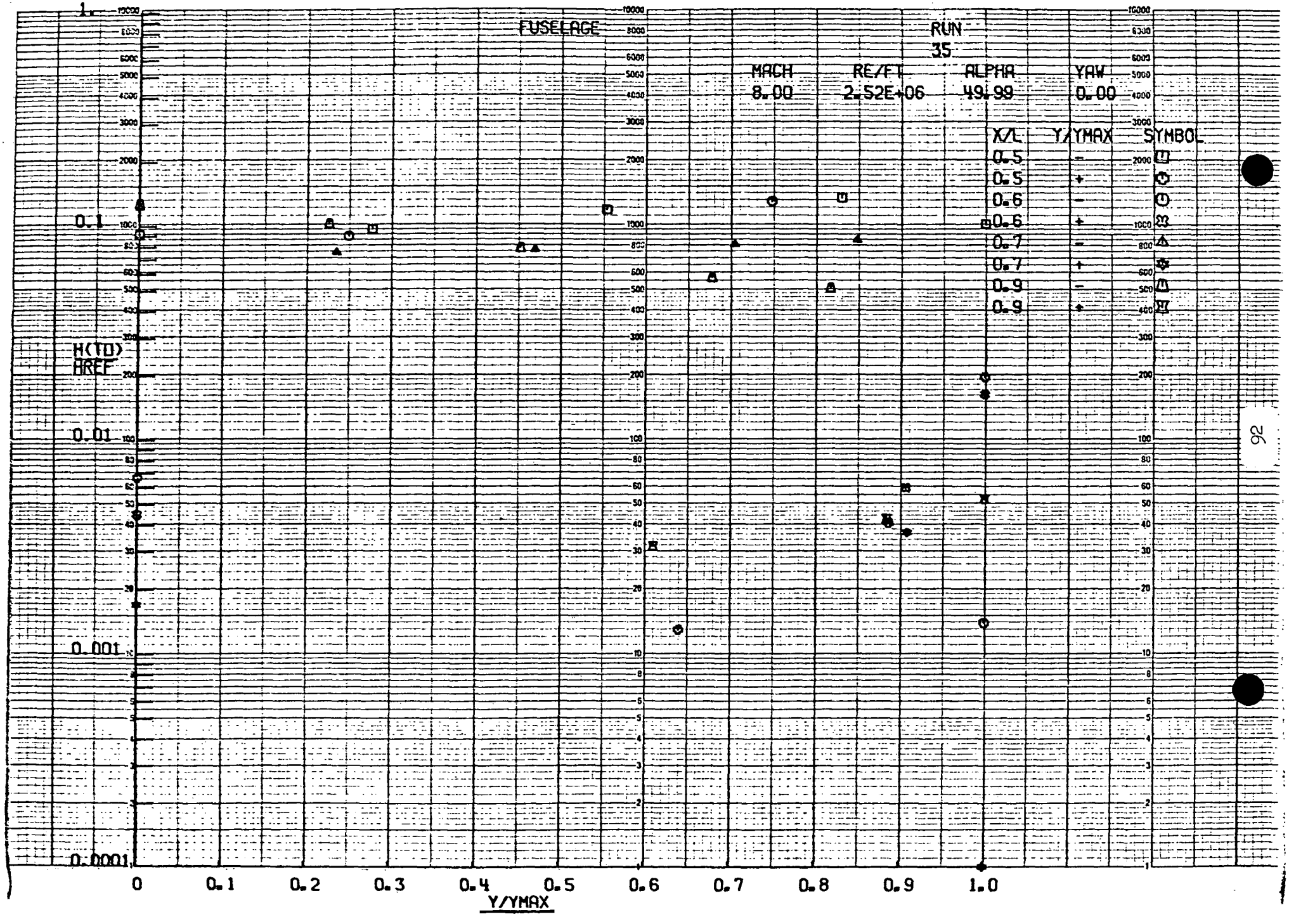
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

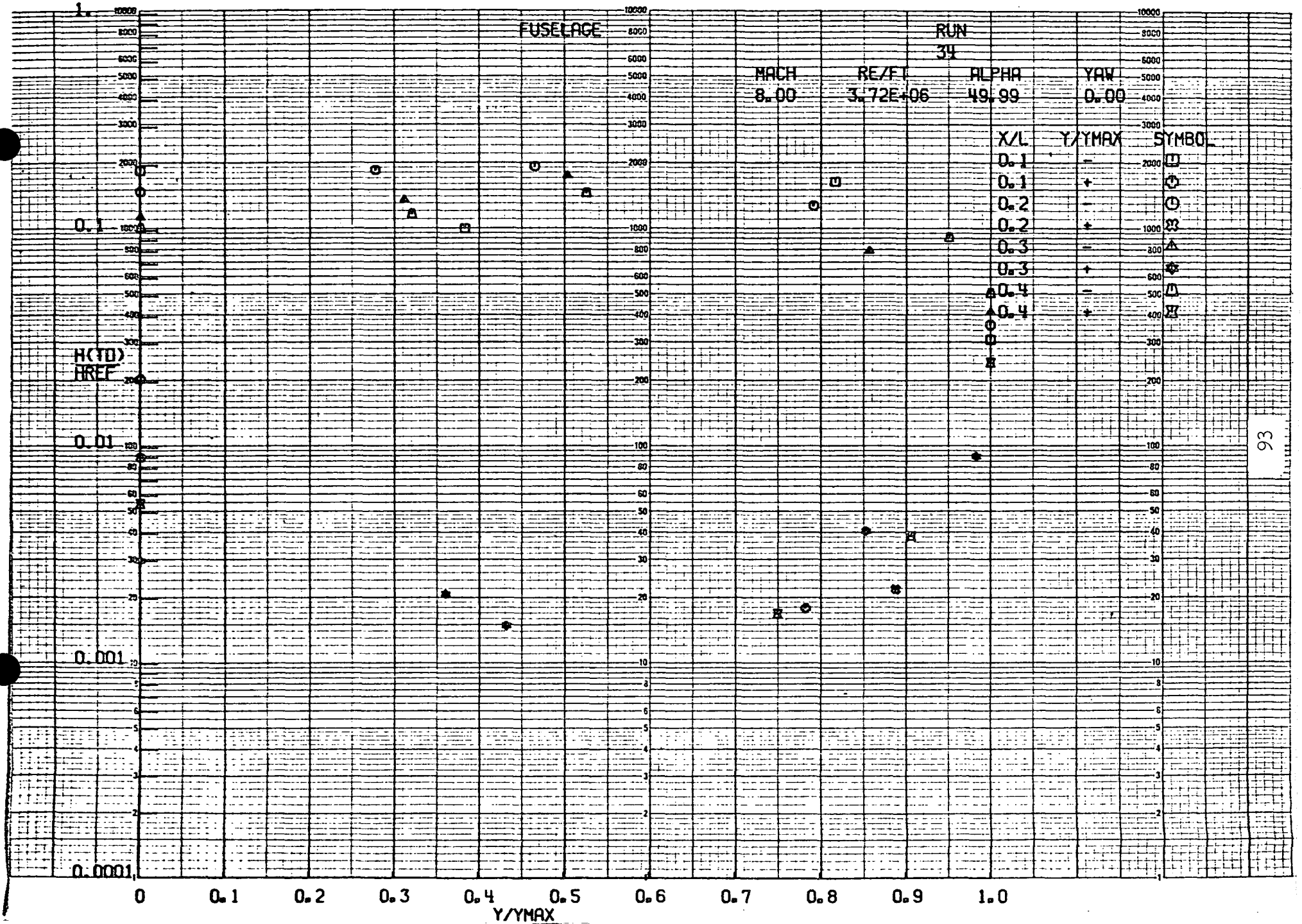

FUSELAGE
RUN
33
MACH
8.00
RE/FT
3.73E+06
ALPHA
39.97
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 –
0.5 +
0.6 –
0.6 +
0.7 –
0.7 +
0.9 –
0.9 +
H(TD)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

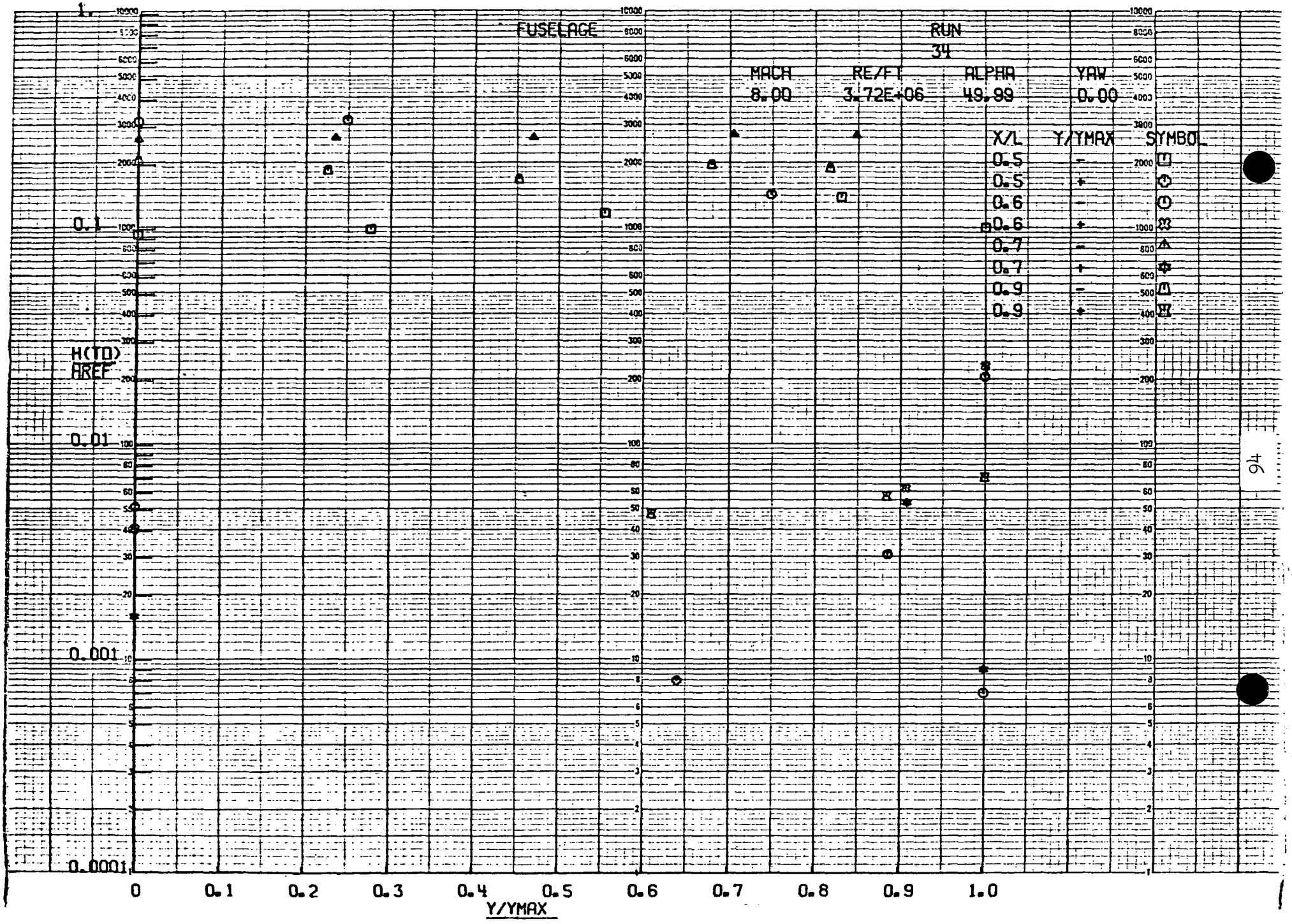

FUSELAGE
RUN
30
MACH
8.00
RE/FT
3.76E+06
ALPHA
39.98
YAW
0.00
GRIT-ON
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

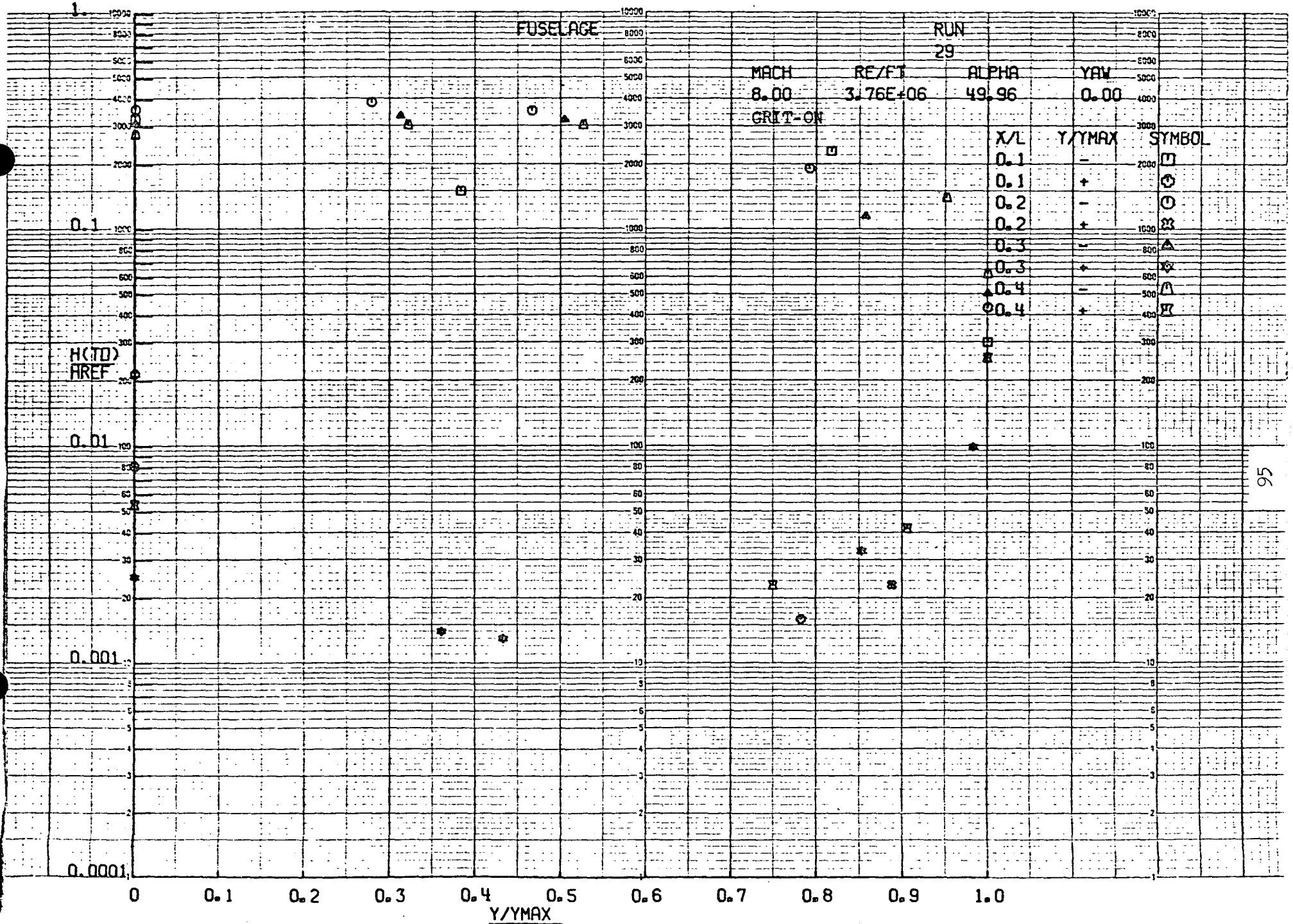

FUSELAGE
GRIT-ON
RUN
30
MACH
8.00
RE/FT
3.76E+06
ALPHA
39.98
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 -
0.5 +
0.6 -
0.6 +
0.7 -
0.7 +
0.9 -
0.9 +
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

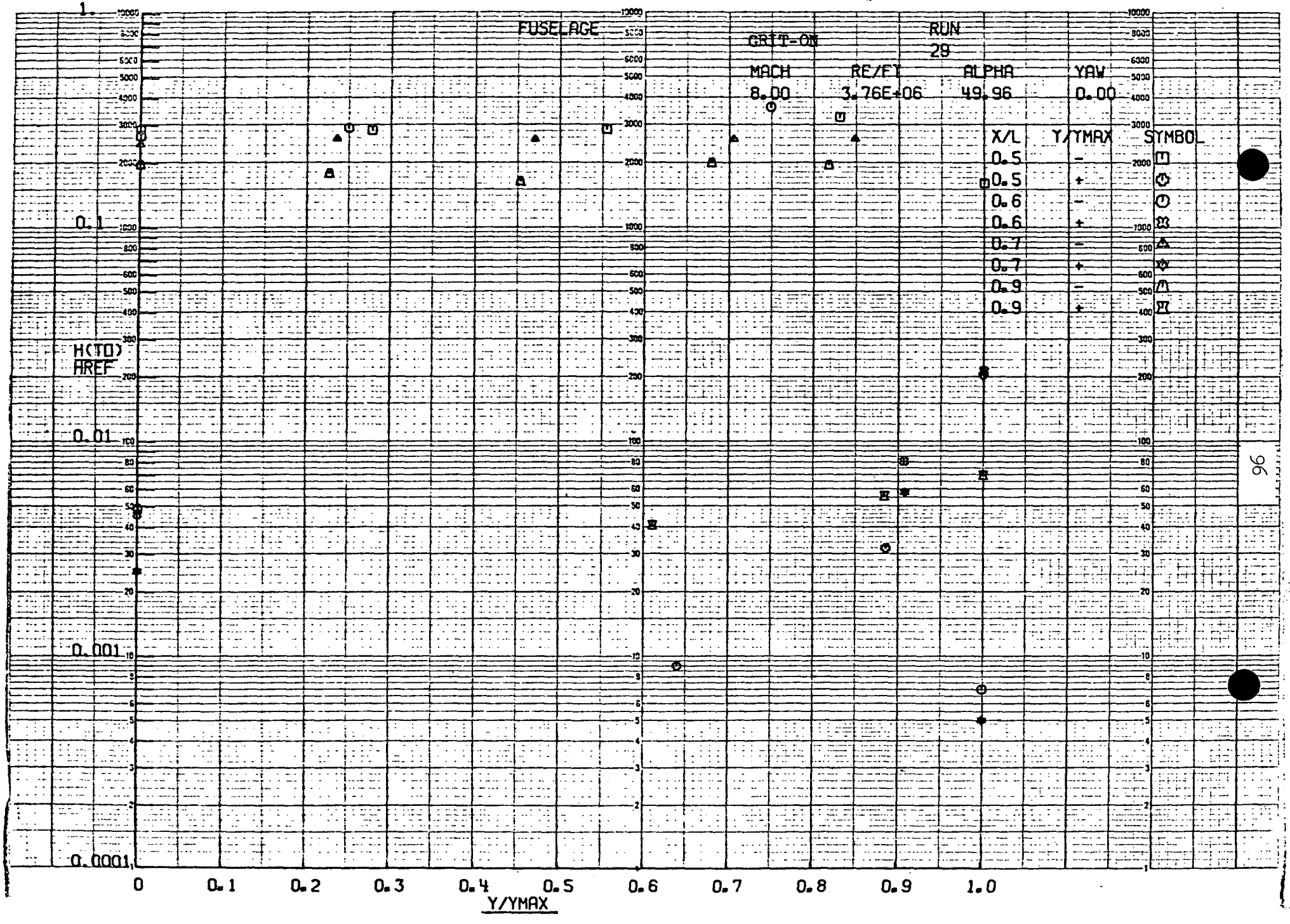

FUSELAGE
RUN
35
MACH
8.00
RE/FT
2.52E+06
ALPHA
49.99
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1
0.1
0.2
0.2
0.3
0.3
0.4
0.4
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

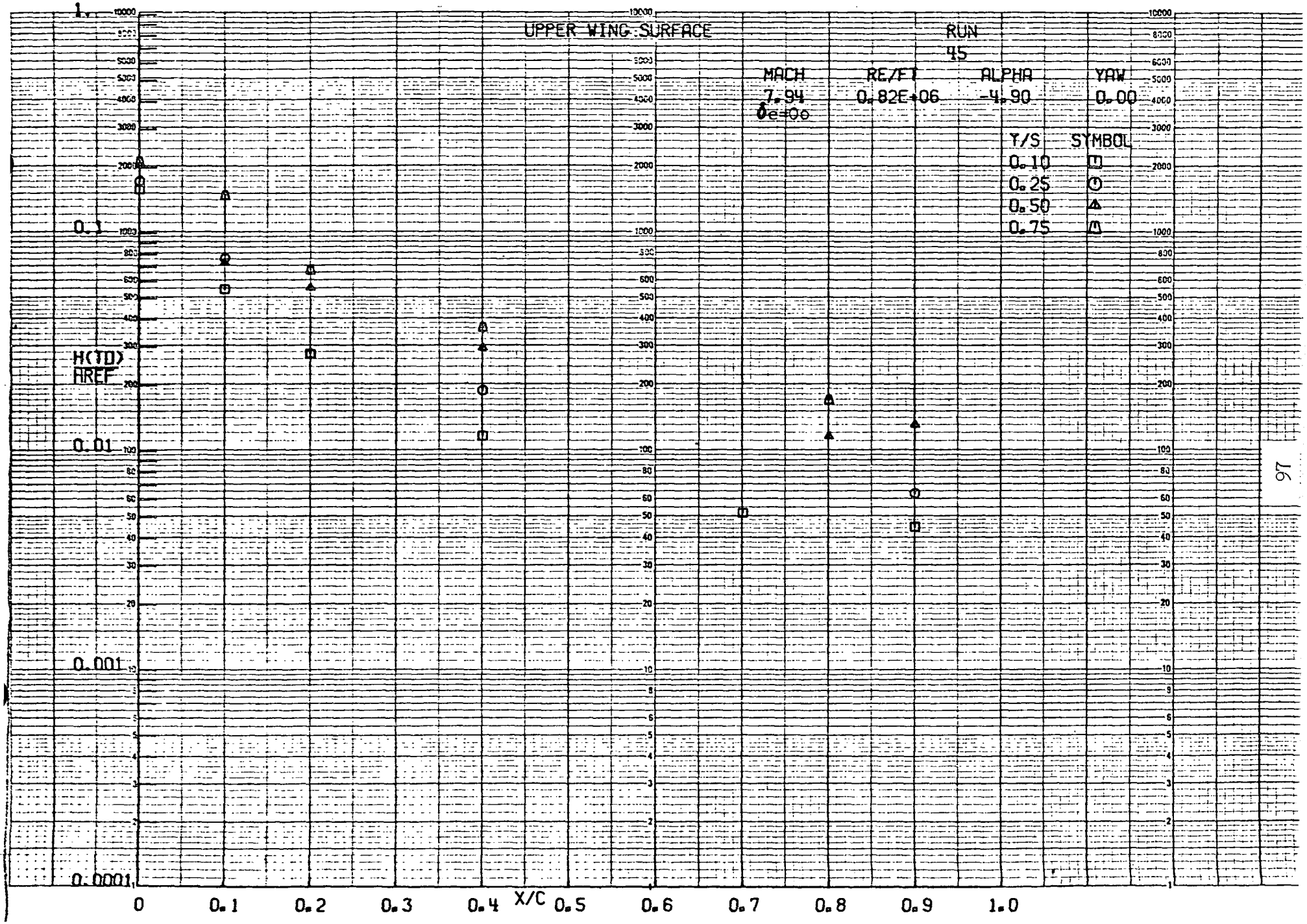

FUSELAGE
RUN
35
MACH
8.00
RE/FT
2.52E+06
ALPHA
49.99
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 -
0.5 +
0.6 -
0.6 +
0.7 -
0.7 +
0.9 -
0.9 +
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

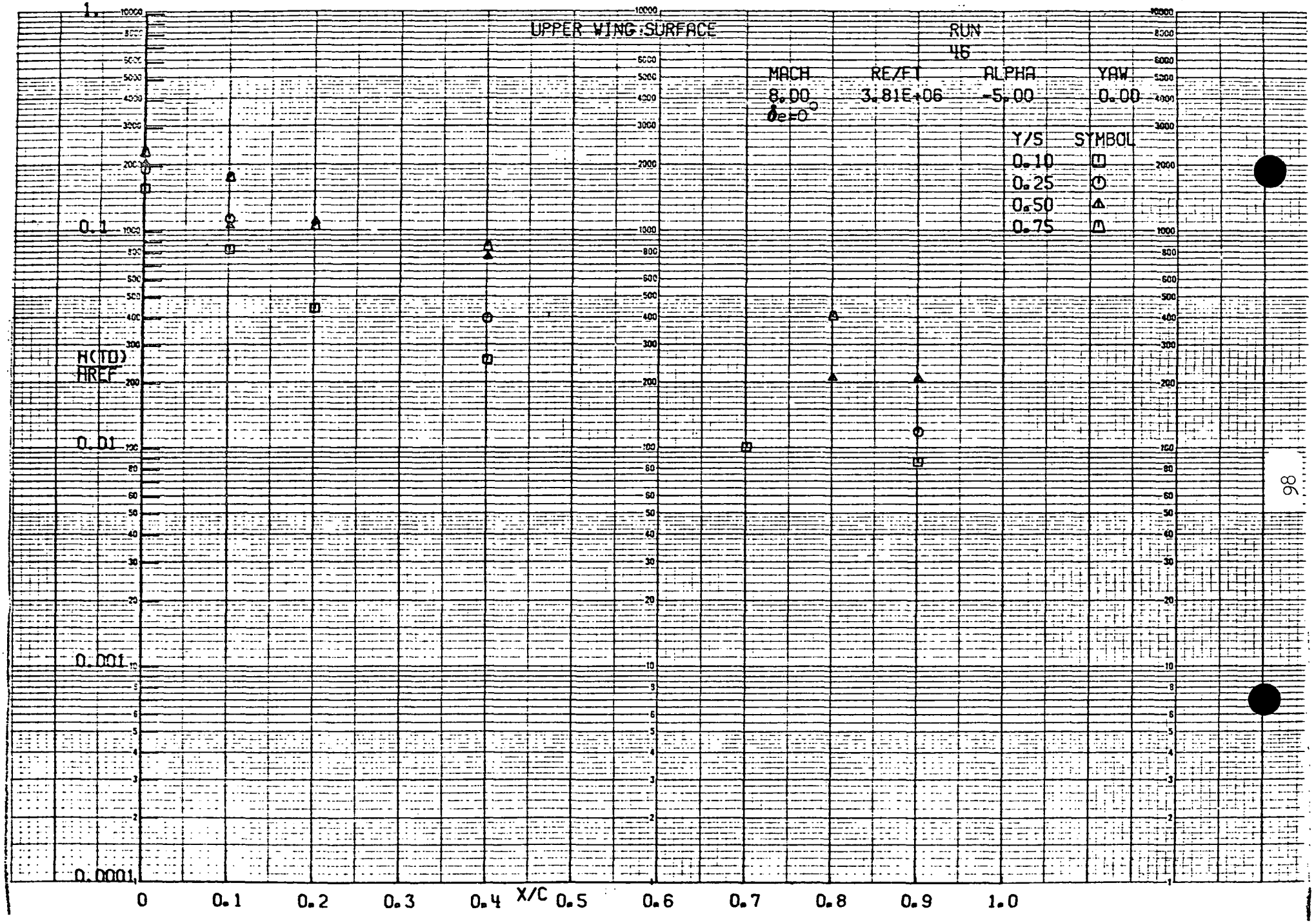

FUSELAGE
RUN
34
MACH
8.00
RE/FT
3.72E+06
ALPHA
49.99
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.1 -
0.1 +
0.2 -
0.2 +
0.3 -
0.3 +
0.4 -
0.4 +
H(TD)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

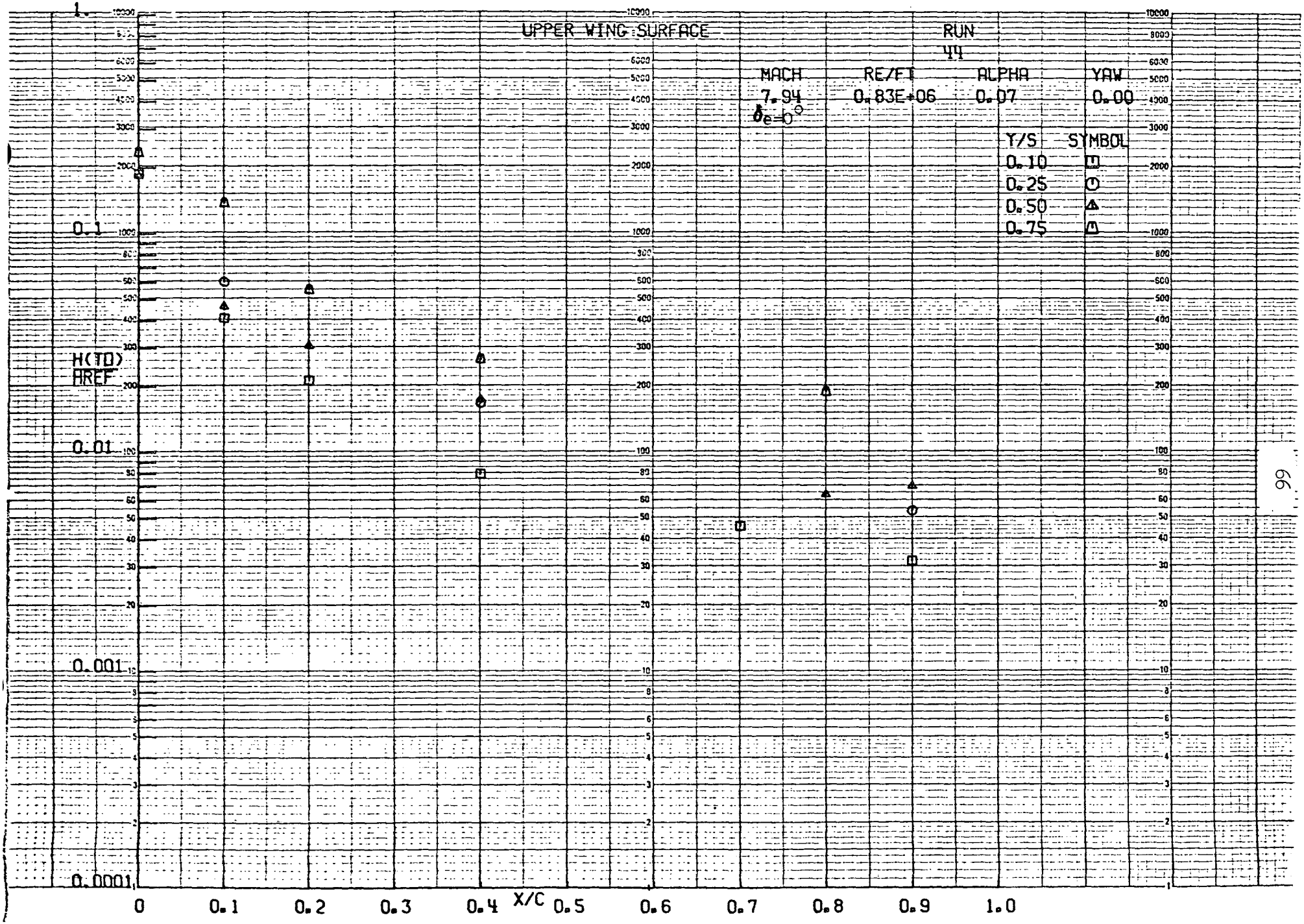

FUSELAGE
RUN
34
MACH
8.00
RE/FT
3.72E+06
ALPHA
49.99
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5
0.5
0.6
0.6
0.7
0.7
0.9
0.9
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

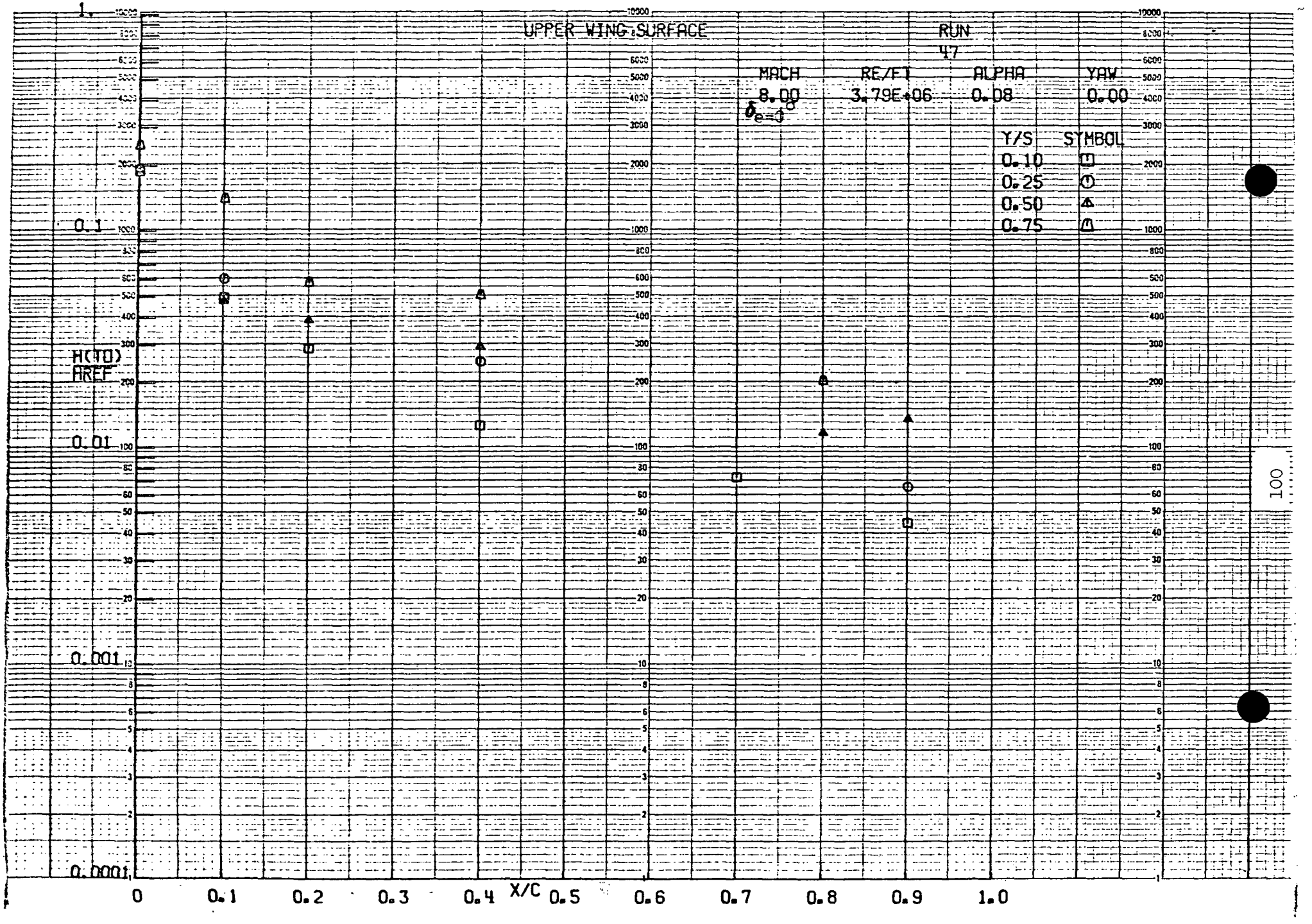

FUSELAGE
RUN
29
MACH
8.00
RE/FT
3.76E+06
ALPHA
49.96
YAW
0.00
GRIT-ON
X/L
Y/YMAX
SYMBOL
0.1 –
0.1 +
0.2 –
0.2 +
0.3 –
0.3 +
0.4 –
0.4 +
H(TD)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

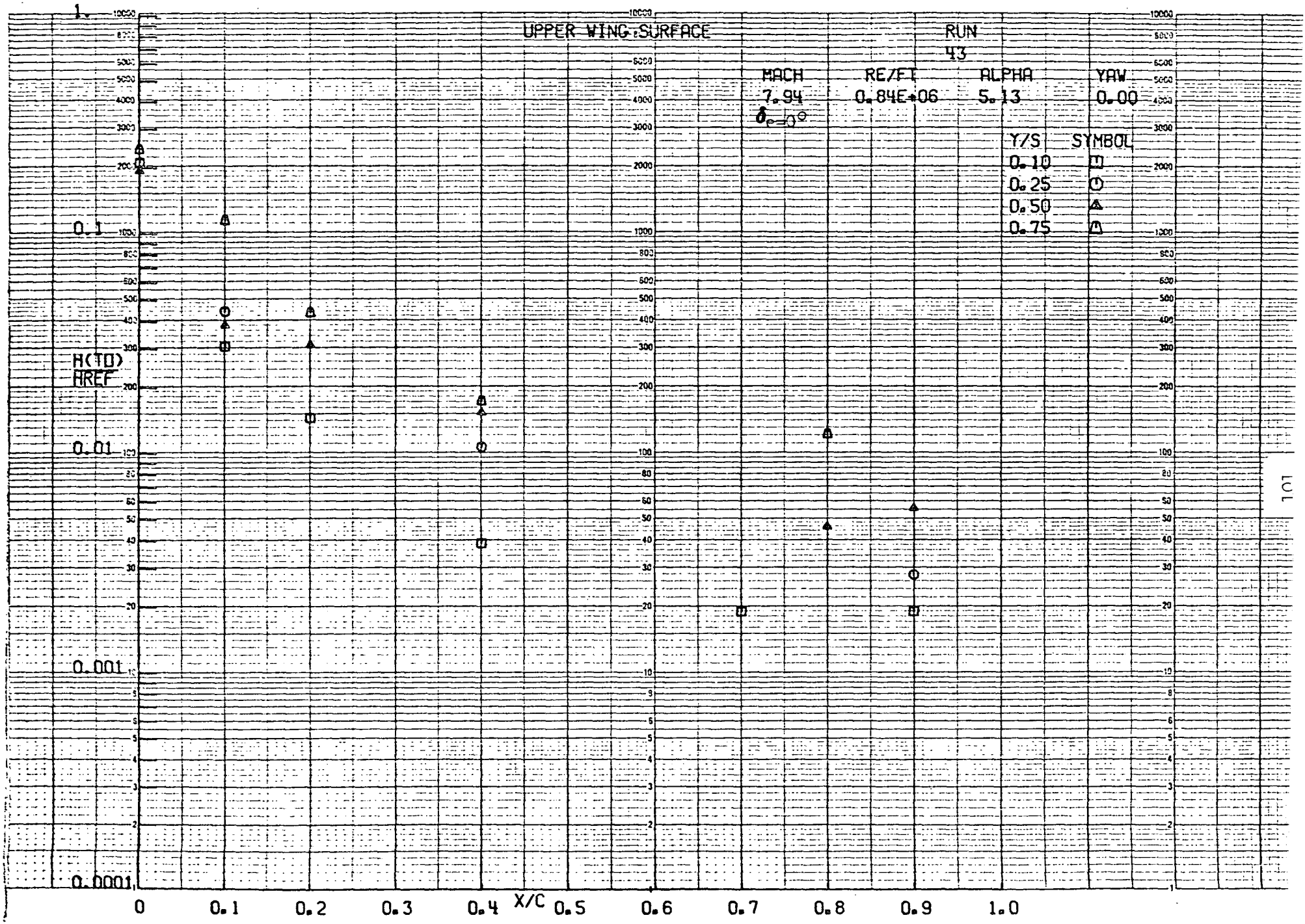

FUSELAGE
GRIT-ON
RUN
29
MACH
8.00
RE/FT
3.76E+06
ALPHA
49.96
YAW
0.00
X/L
Y/YMAX
SYMBOL
0.5 -
0.5 +
0.6 -
0.6 +
0.7 -
0.7 +
0.9 -
0.9 +
H(TO)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Y/YMAX

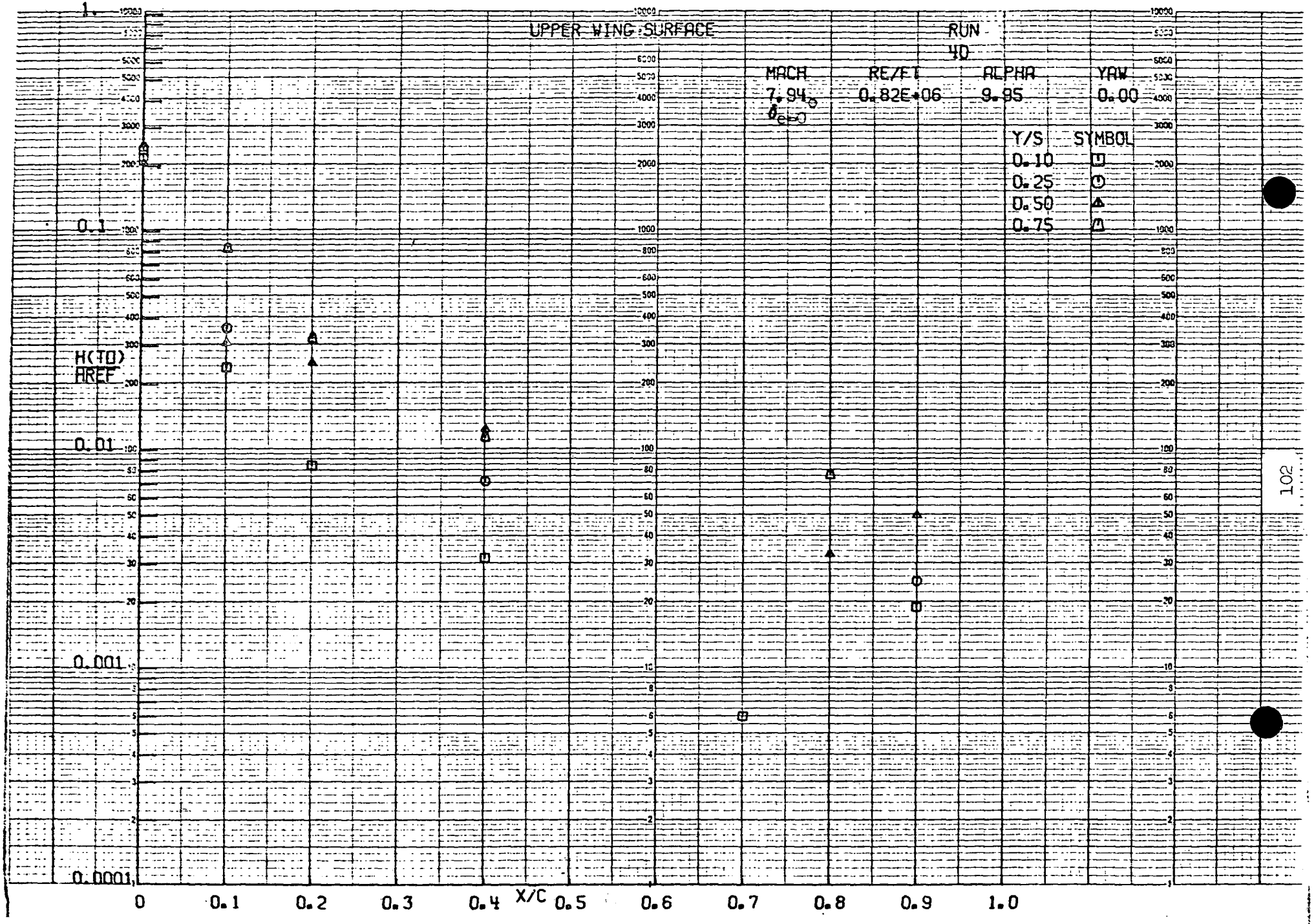

UPPER WING SURFACE
RUN
45
MACH
7.94
RE/FT
0.82E+06
ALPHA
-4.90
YAW
0.00
δe=0o
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

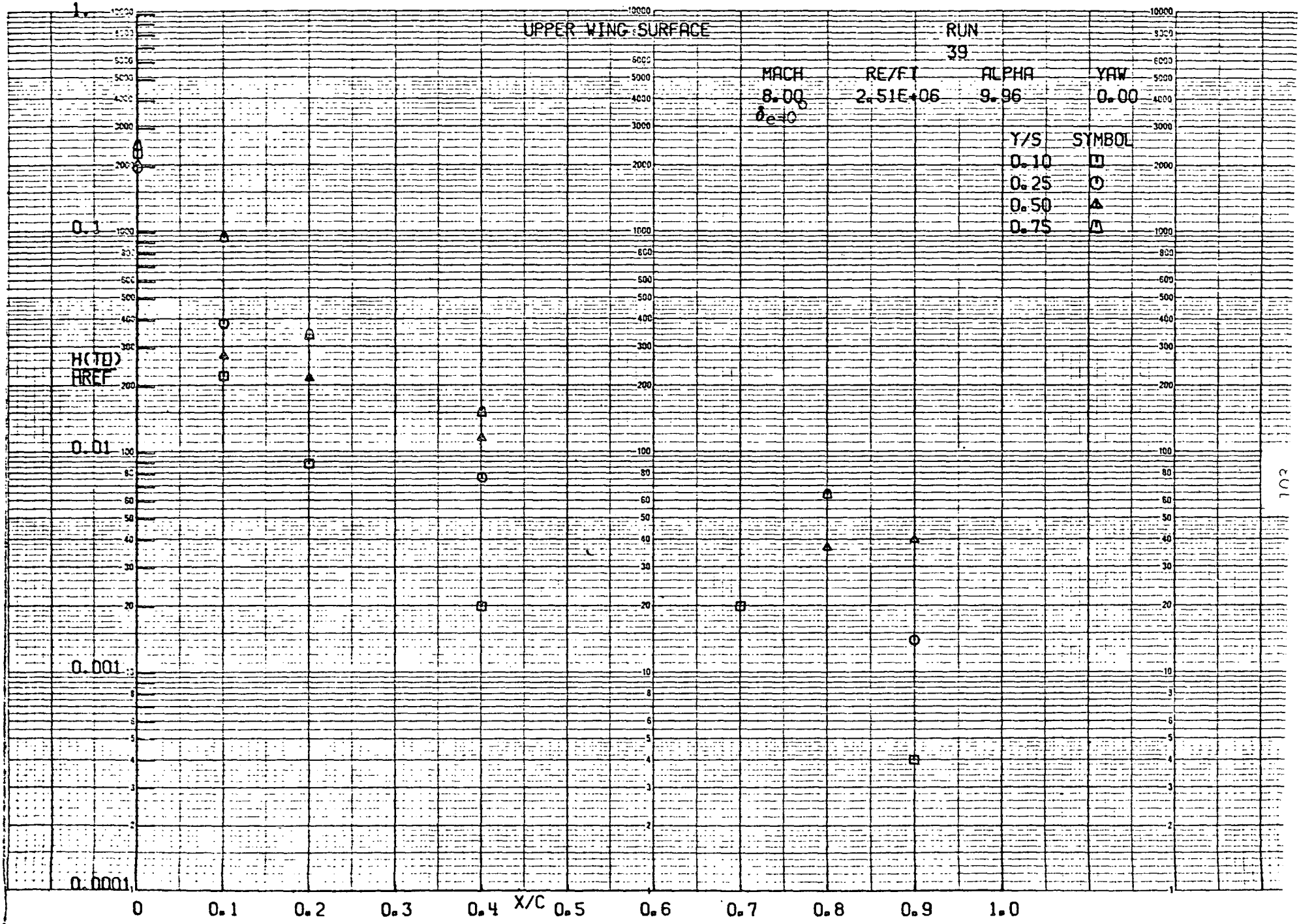

UPPER WING SURFACE
RUN
46
MACH
8.00
RE/FT
3.81E+06
ALPHA
-5.00
YAW
0.00
δe=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

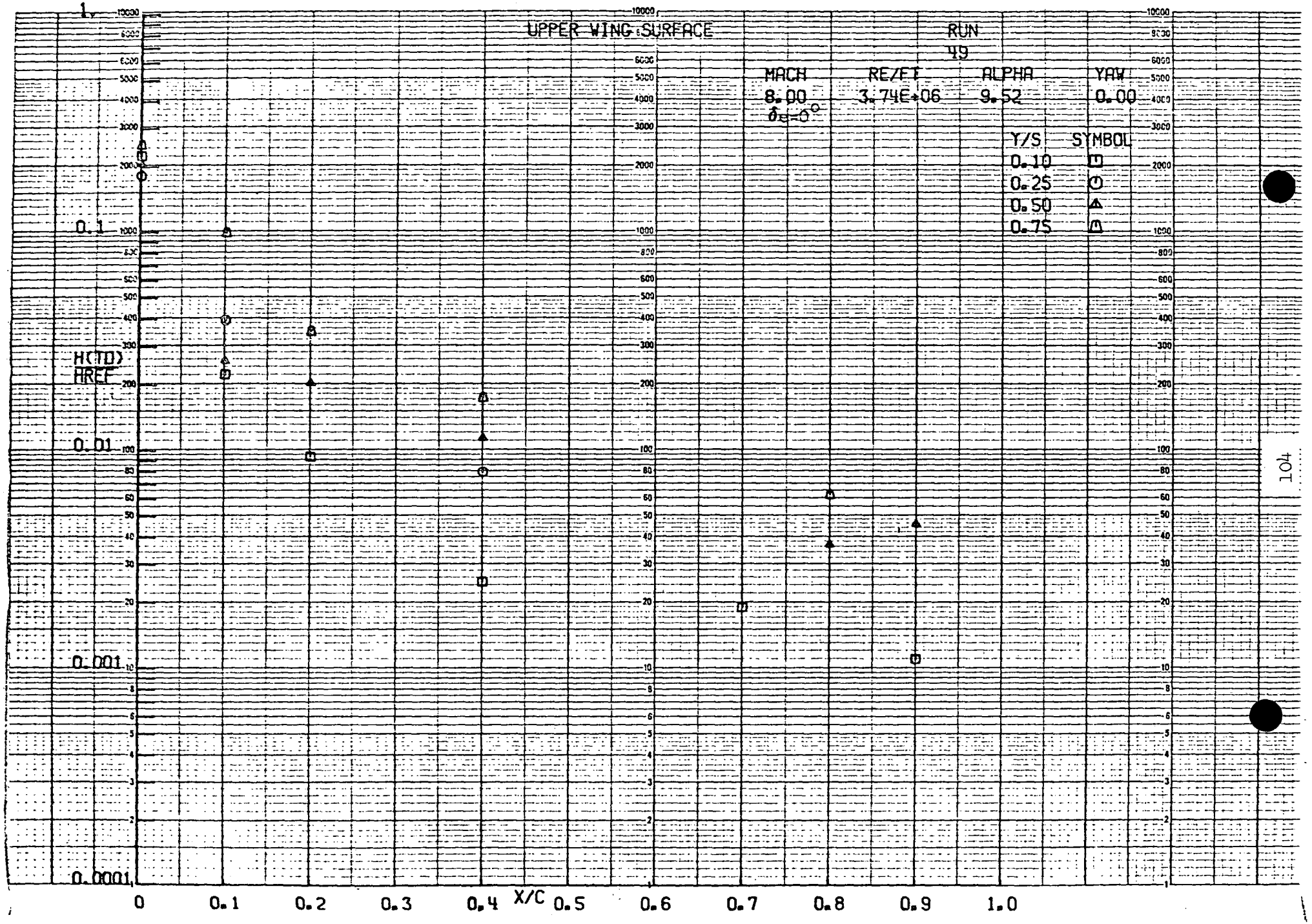

UPPER WING SURFACE
RUN
44
MACH
7.94
RE/FT
0.83E+06
ALPHA
0.07
YAW
0.00
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

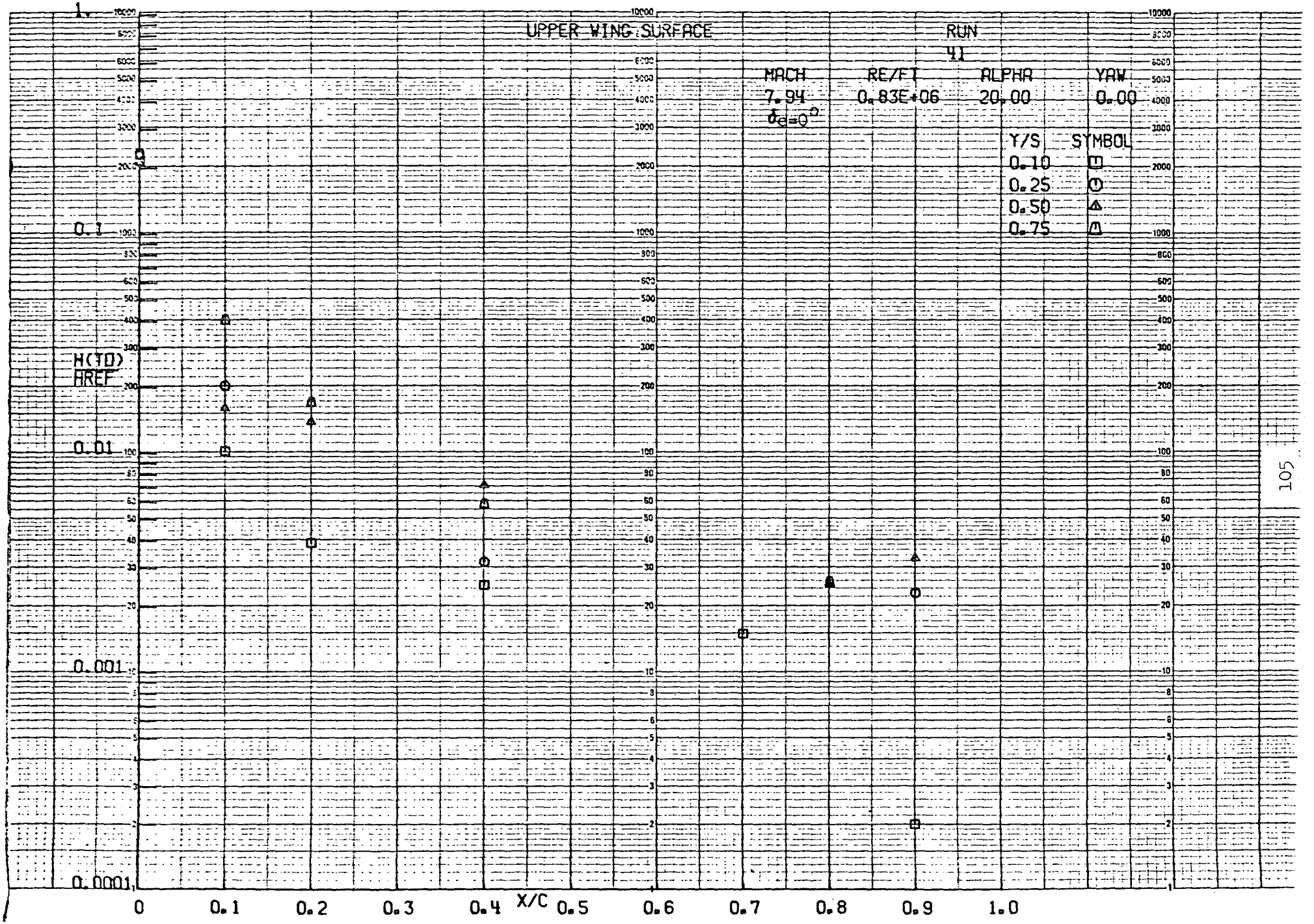

UPPER WING SURFACE
RUN
47
MACH
8.00
RE/FT
3.79E+06
ALPHA
0.08
YAW
0.00
$\delta_e = 0$
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0
100

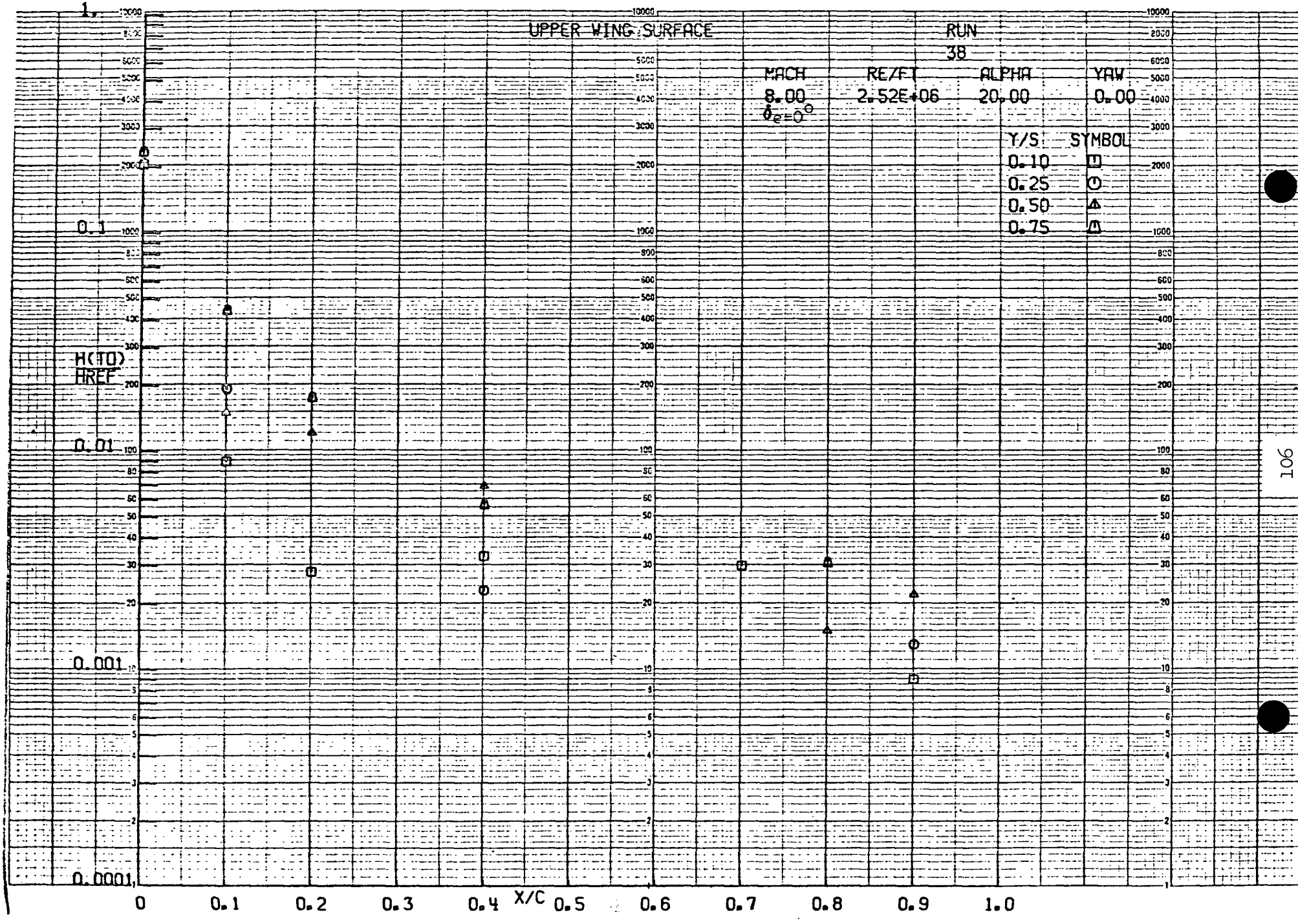

UPPER WING SURFACE
RUN
43
MACH
7.94
RE/FT
0.84E+06
ALPHA
5.13
YAW
0.00
$\delta_{e=0}$°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

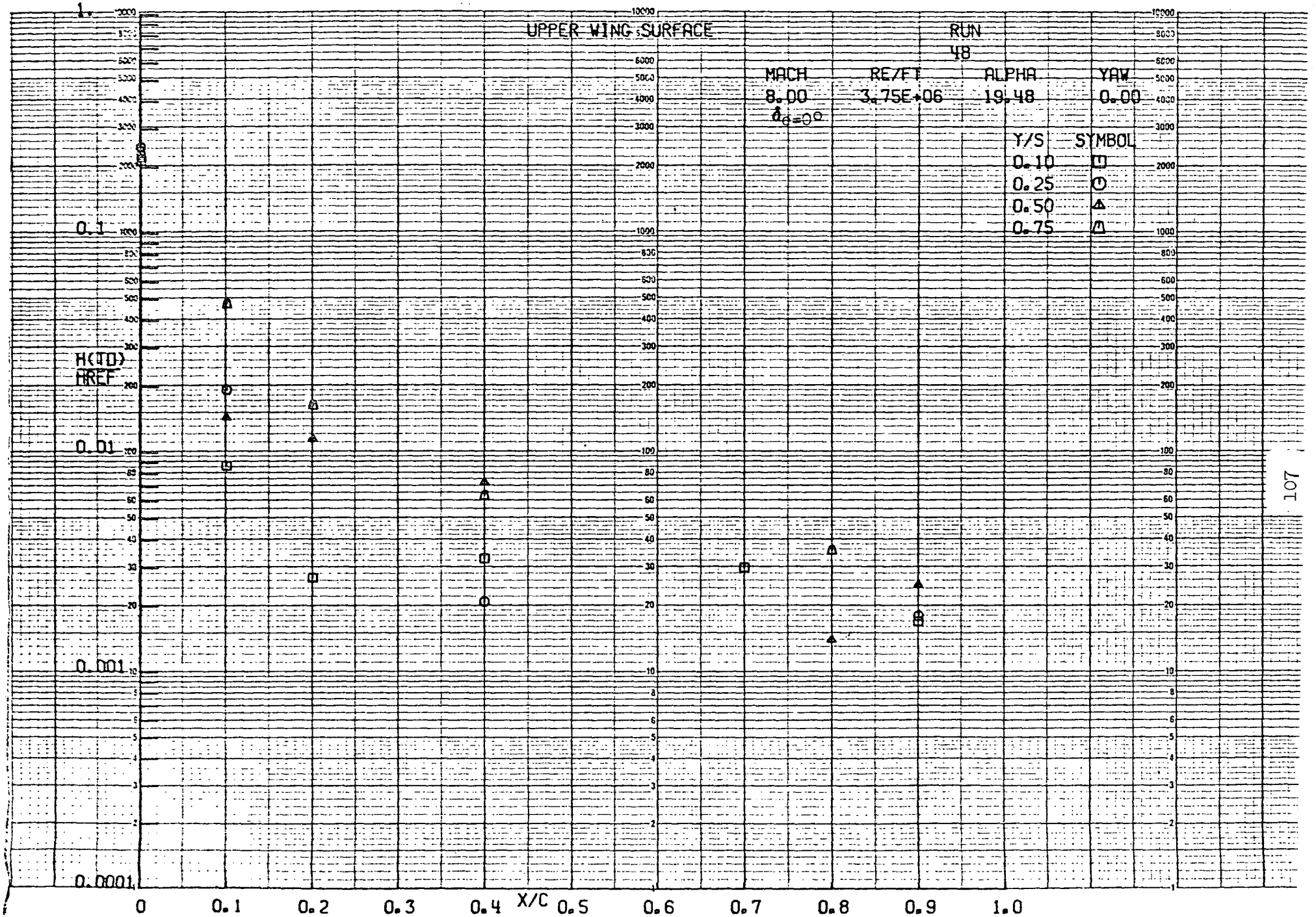

UPPER WING SURFACE
RUN
40
MACH
7.94
RE/FT
0.82E+06
ALPHA
9.95
YAW
0.00
δ_e=0
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

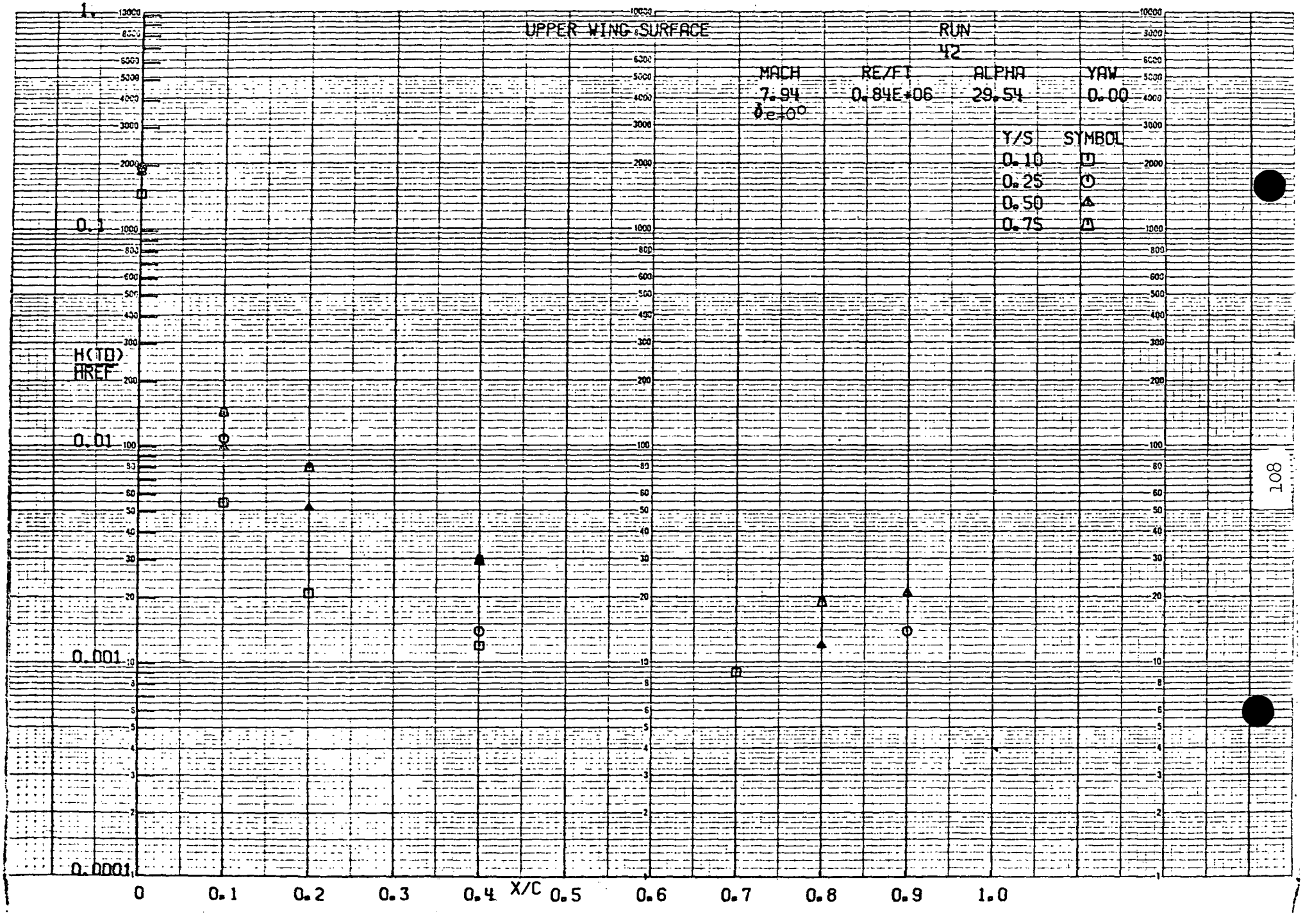

UPPER WING SURFACE
RUN
39
MACH
8.00
RE/FT
2.51E+06
ALPHA
9.96
YAW
0.00
δ_e=0
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

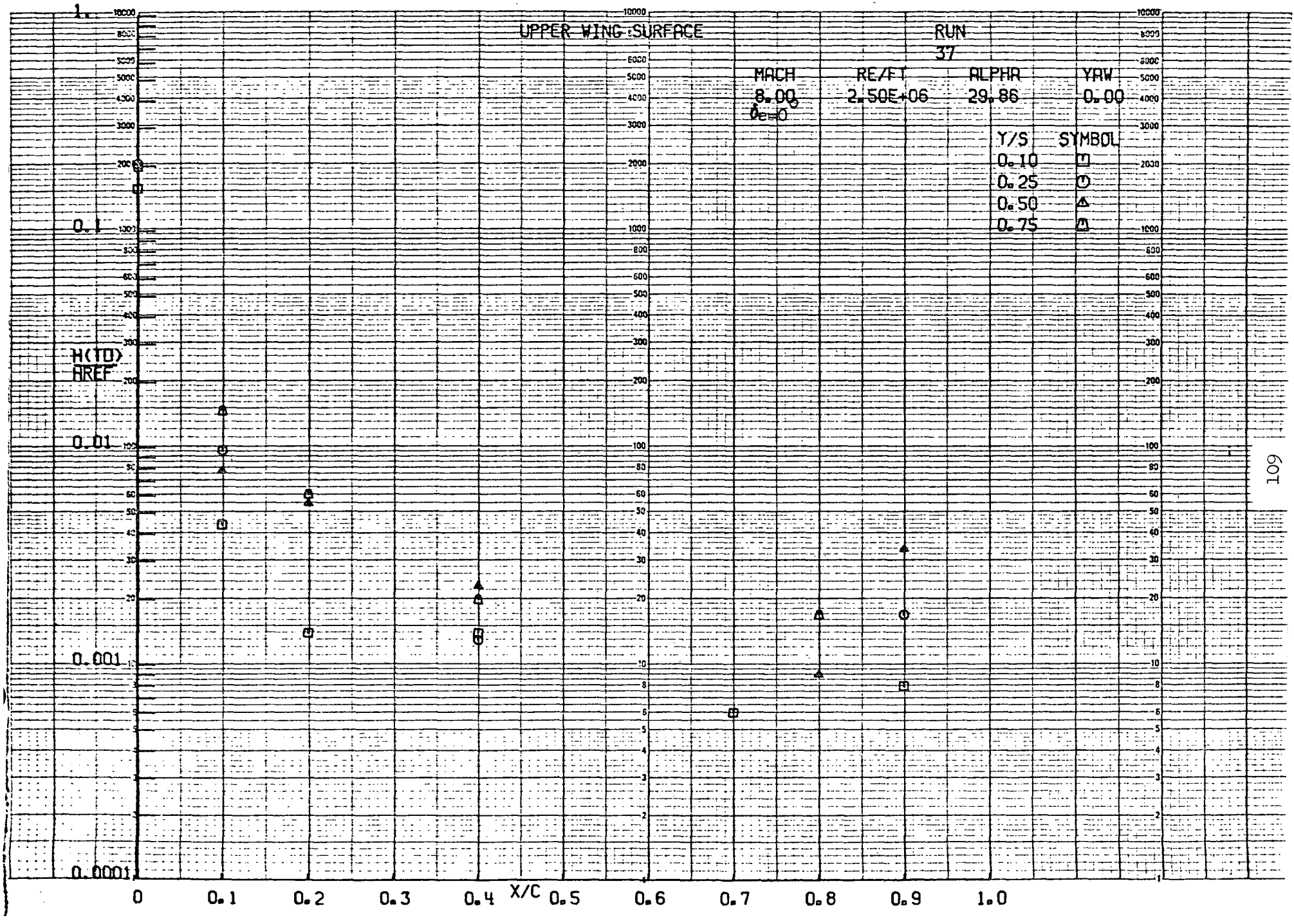

UPPER WING SURFACE
RUN
49
MACH
8.00
RE/FT
3.74E+06
ALPHA
9.52
YAW
0.00
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

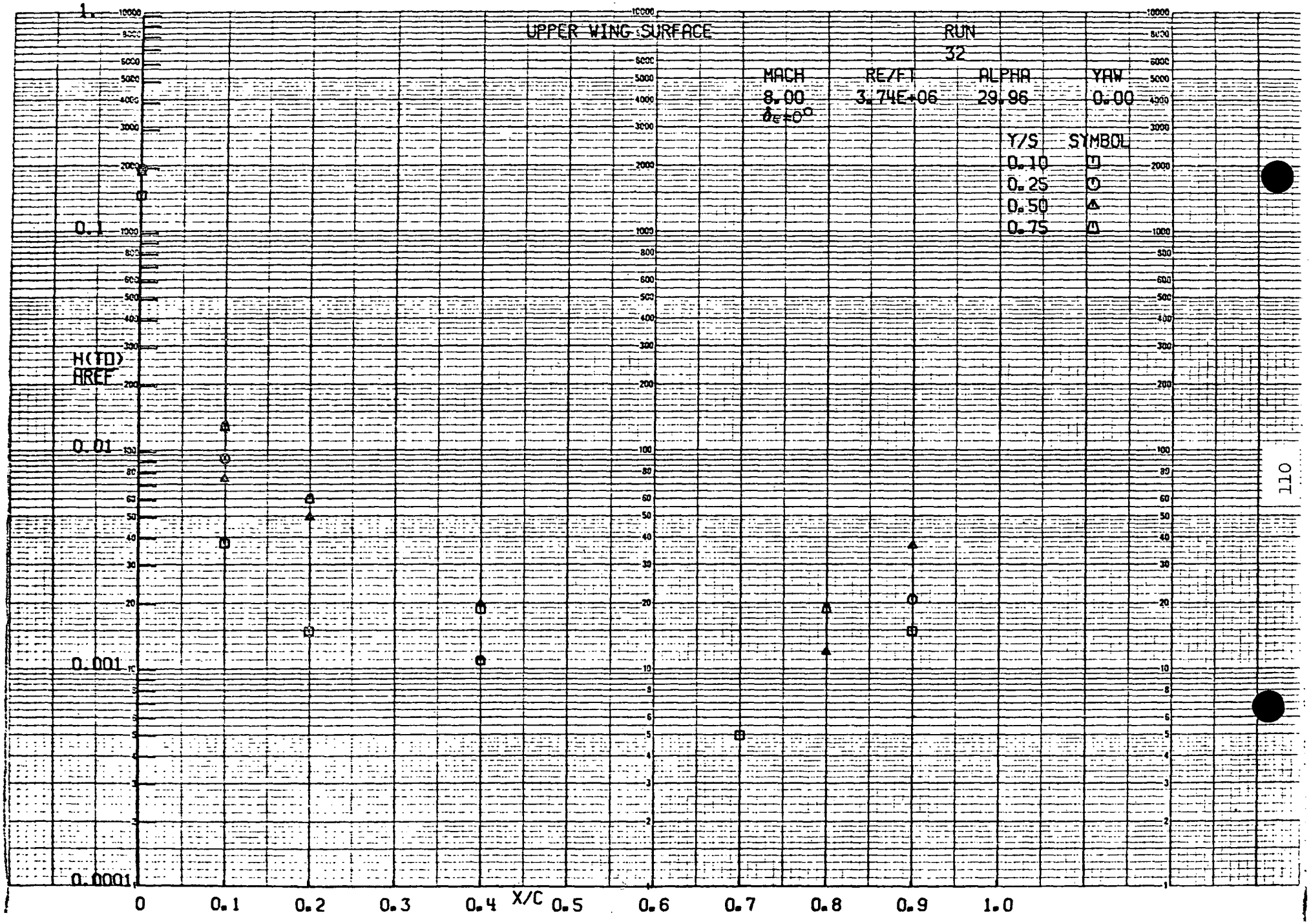

UPPER WING SURFACE
RUN
41
MACH
7.94
RE/FT
0.83E+06
ALPHA
20.00
YAW
0.00
$\delta_e=0^\circ$
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

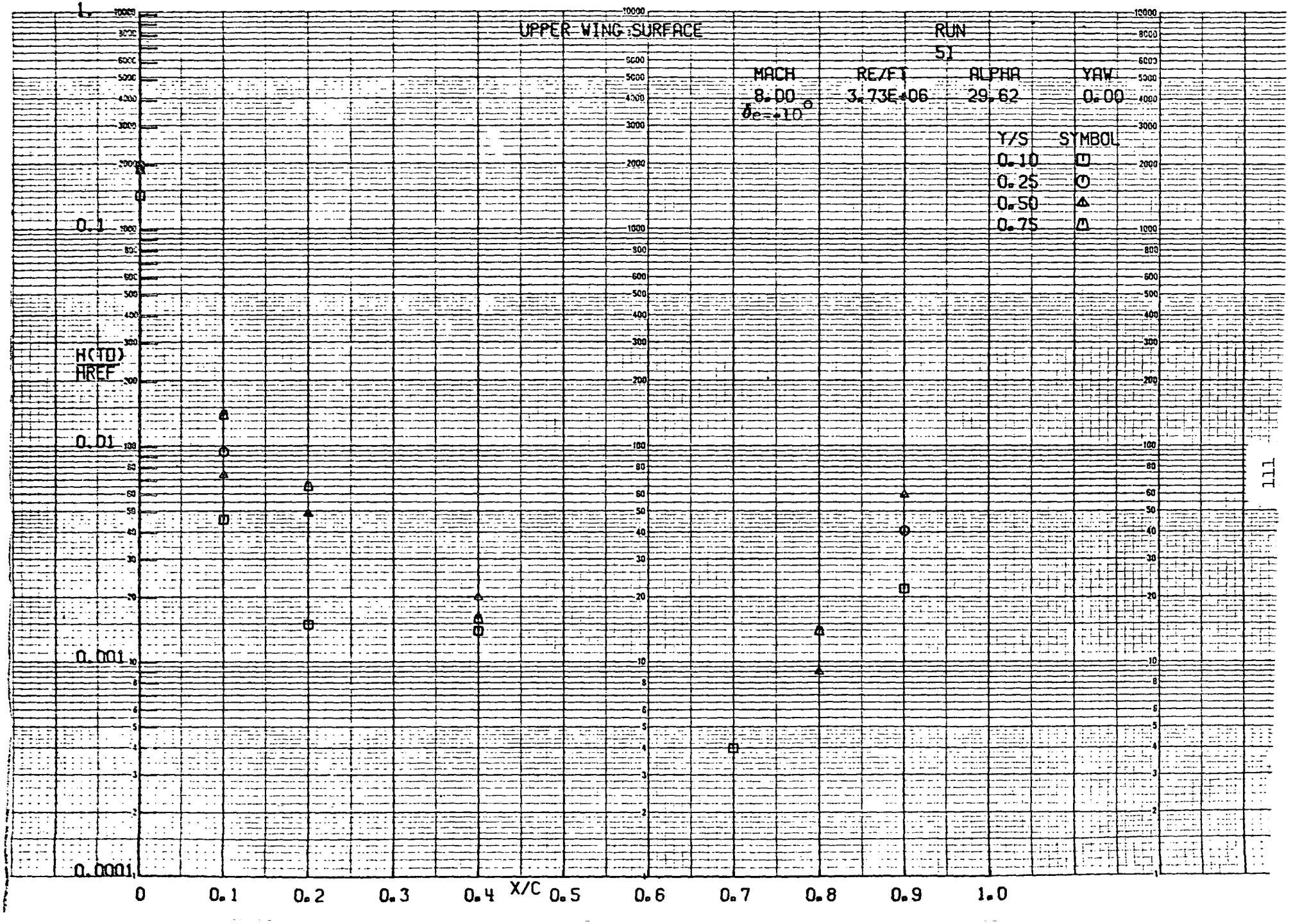

1.
UPPER WING SURFACE
RUN
38
MACH
8.00
$\delta_e=0^\circ$
RE/FT
2.52E+06
ALPHA
20.00
YAW
0.00
Y/S
SYMBOL
0.10
0.25
0.50
0.75
0.1
H(TO)
HREF
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0
106

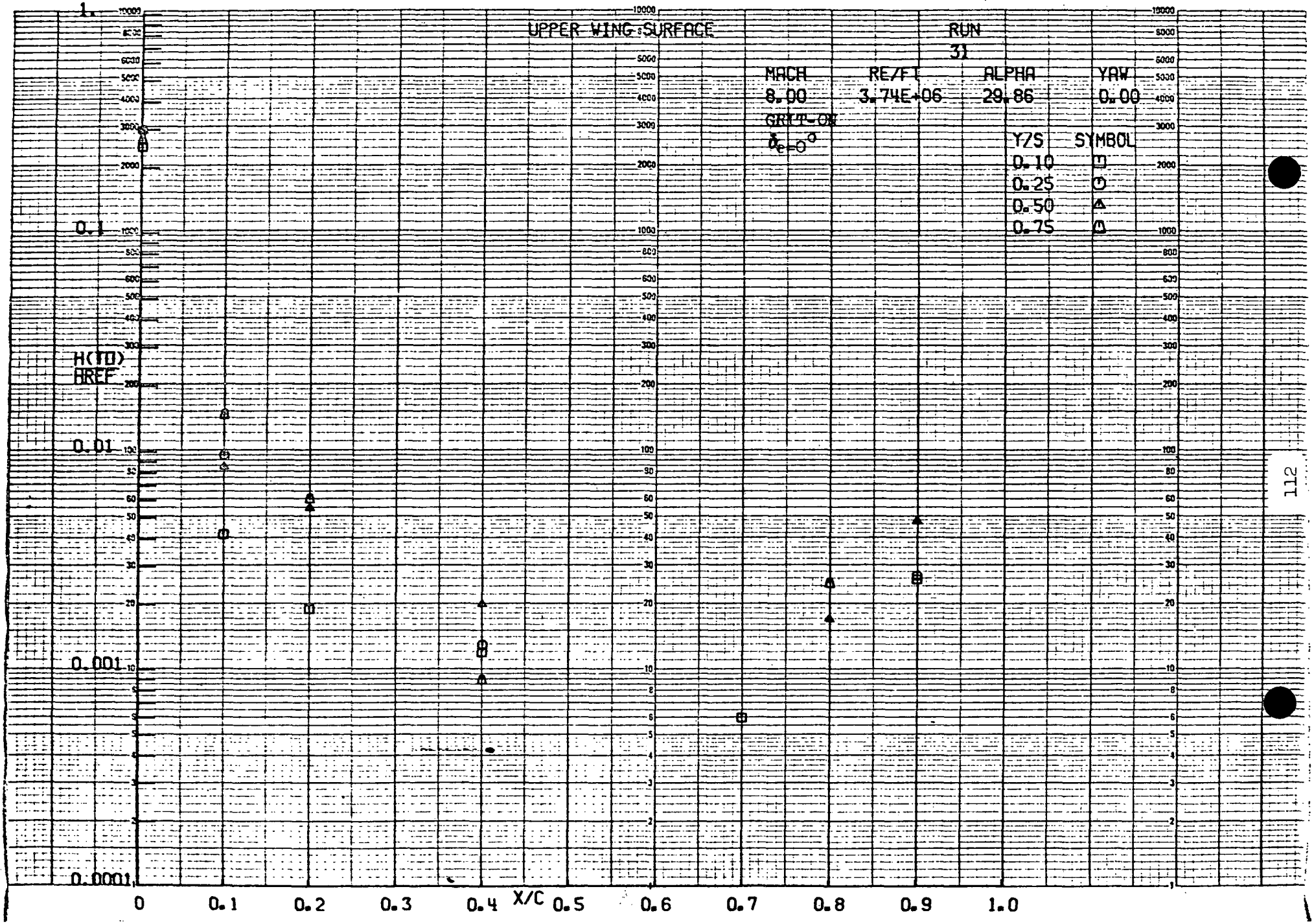

UPPER WING SURFACE
RUN
48
MACH
8.00
RE/FT
3.75E+06
ALPHA
19.48
YAW
0.00
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
X/C

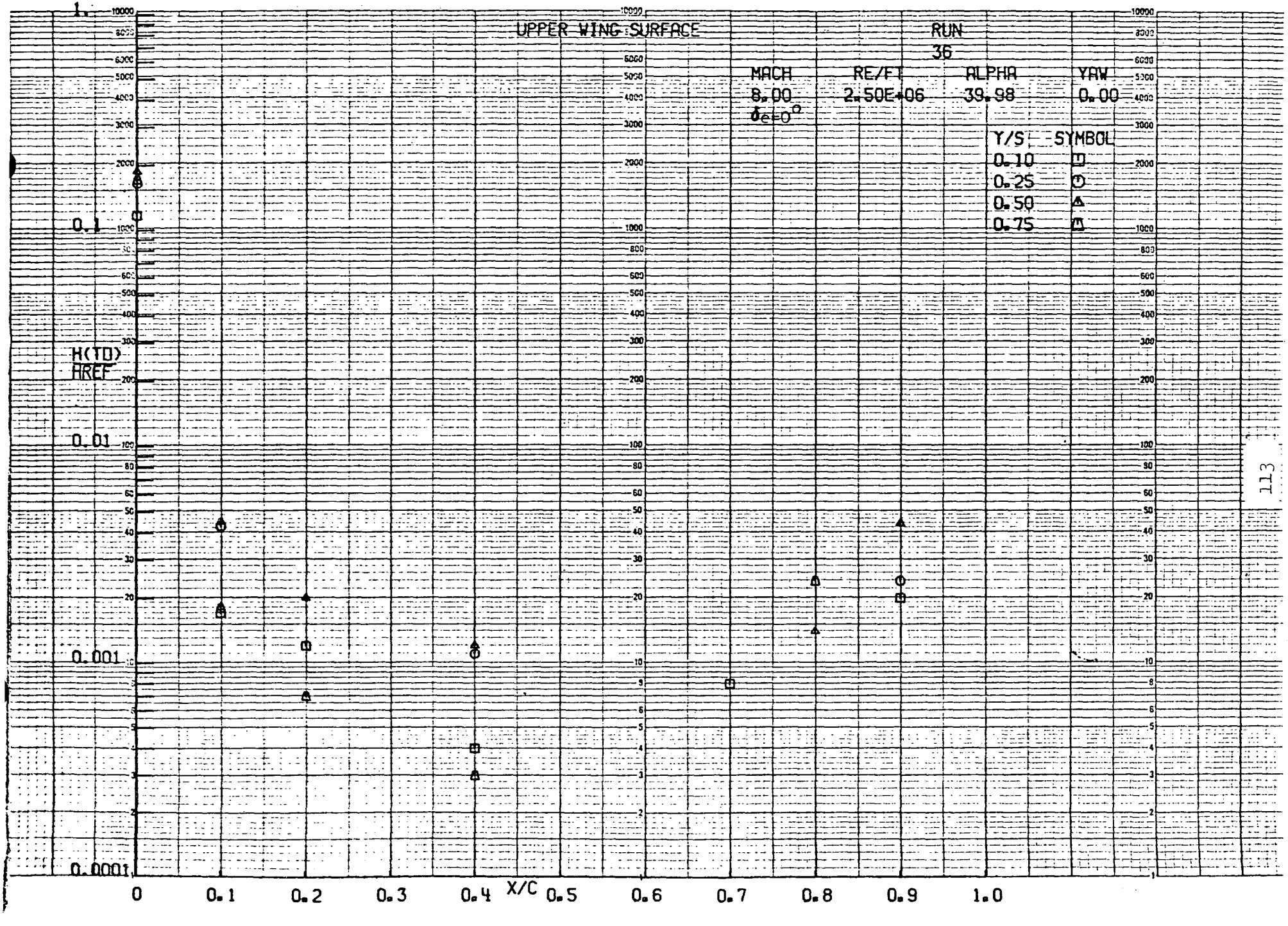

UPPER WING SURFACE
RUN
42
MACH
7.94
RE/FT
0.84E+06
ALPHA
29.54
YAW
0.00
δe=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

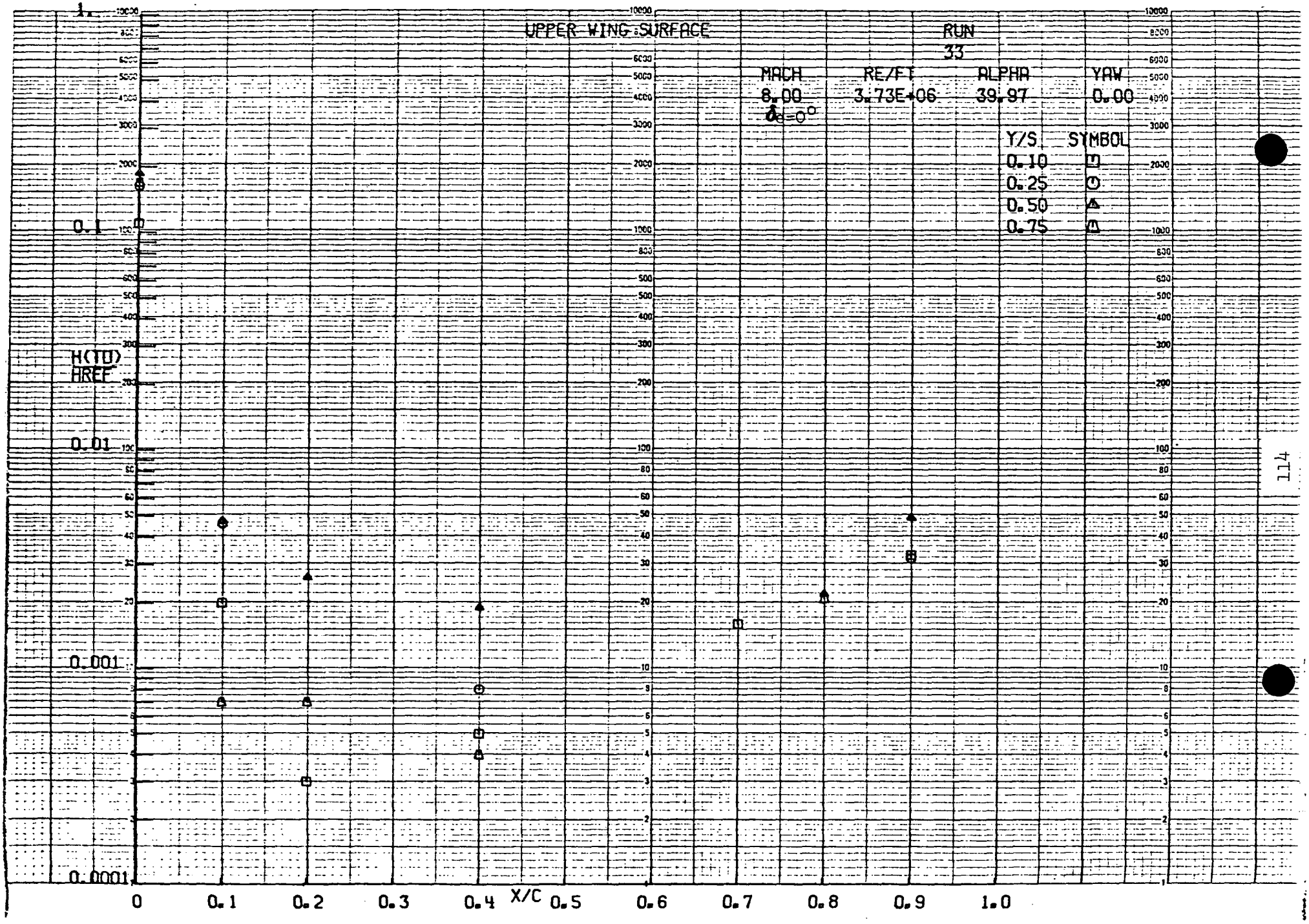

UPPER WING SURFACE
RUN
37
MACH
8.00
RE/FT
2.50E+06
ALPHA
29.86
YAW
0.00
δe=0
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

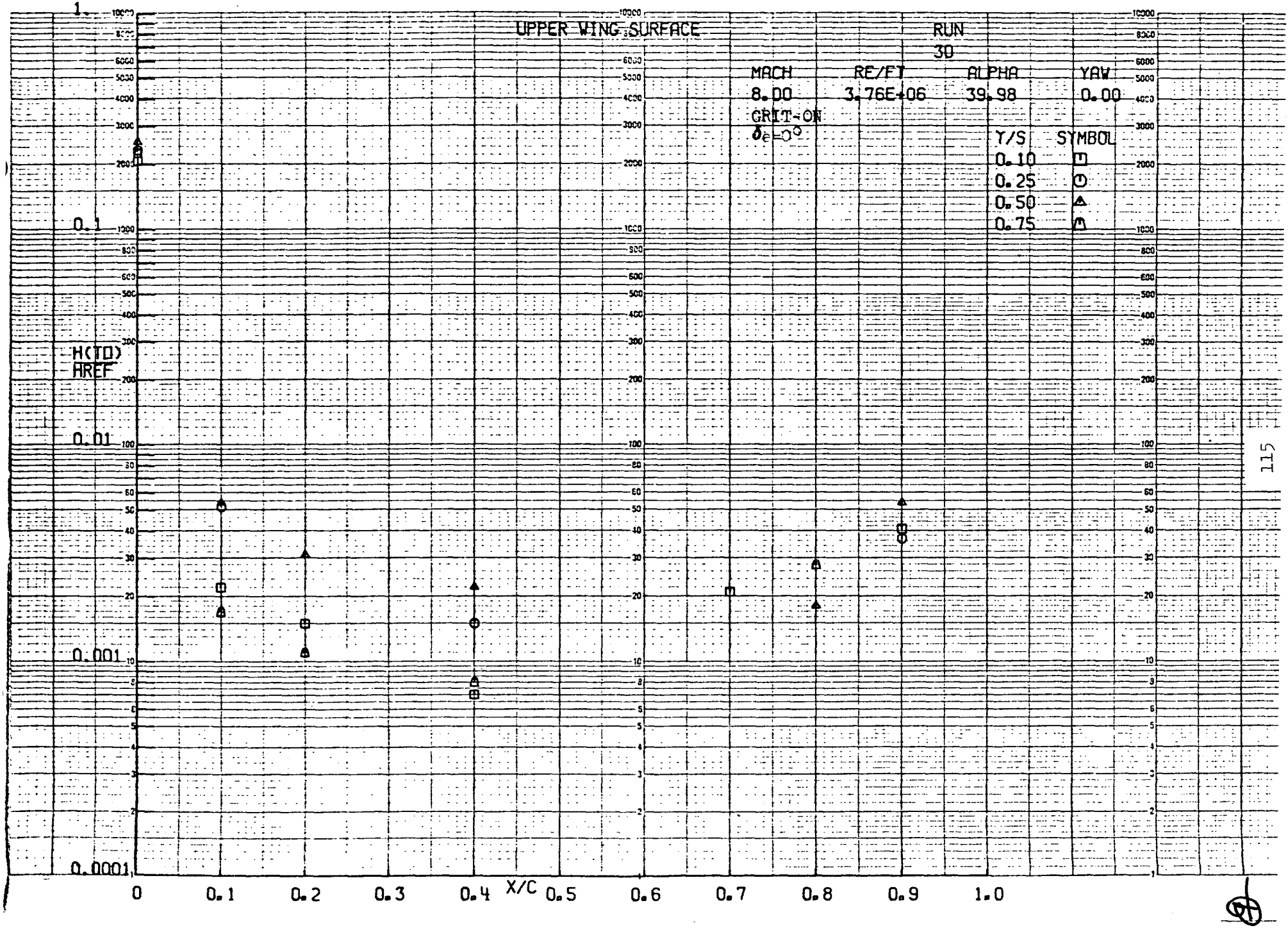

UPPER WING SURFACE
RUN
32
MACH
8.00
RE/FT
3.74E+06
ALPHA
29.96
YAW
0.00
δ_E=0°
Y/S SYMBOL
0.10
0.25
0.50
0.75
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

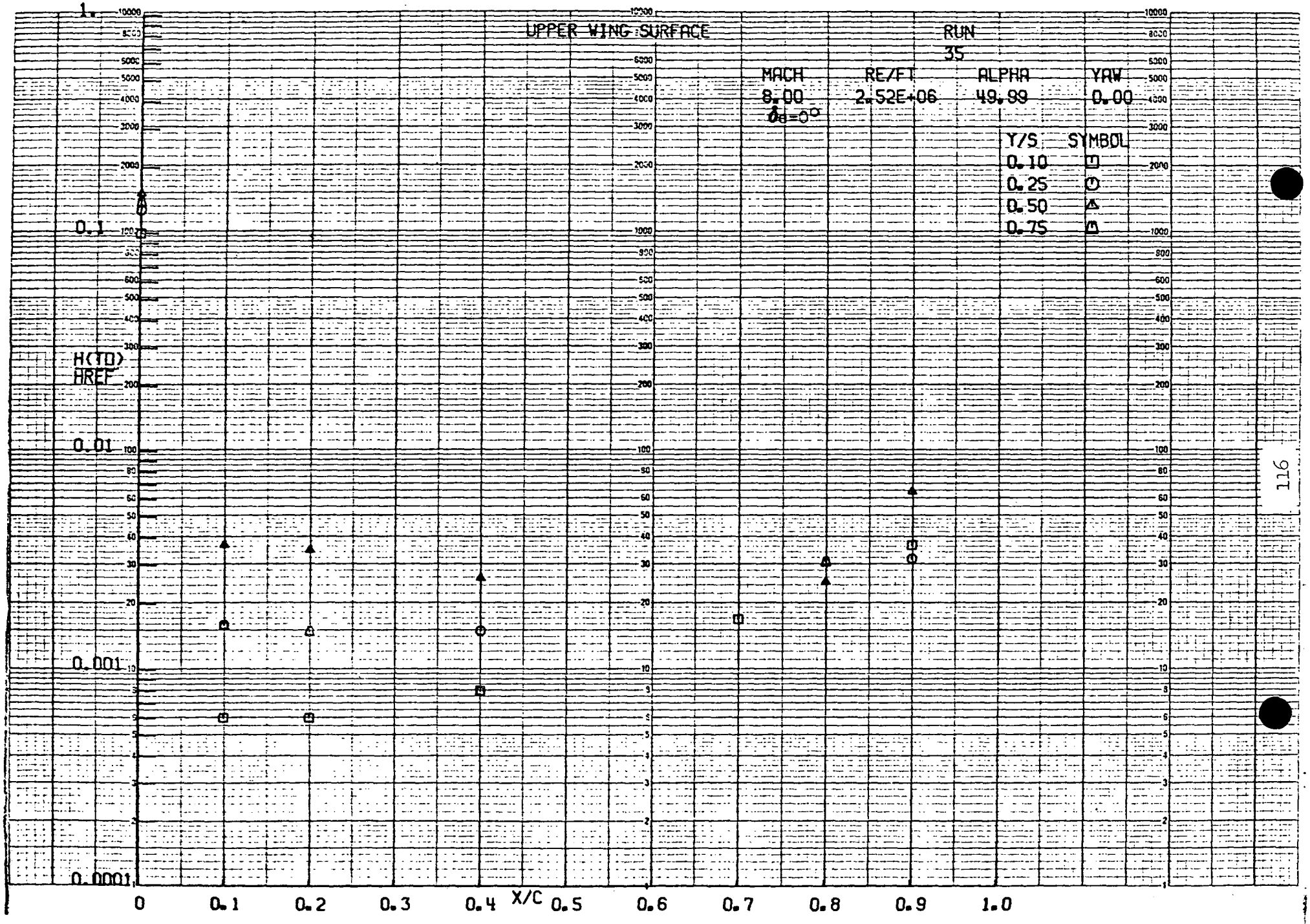

UPPER WING SURFACE
RUN
51
MACH
8.00
RE/FT
3.73E+06
ALPHA
29.62
YAW
0.00
$\delta_e = +10^\circ$
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0
111

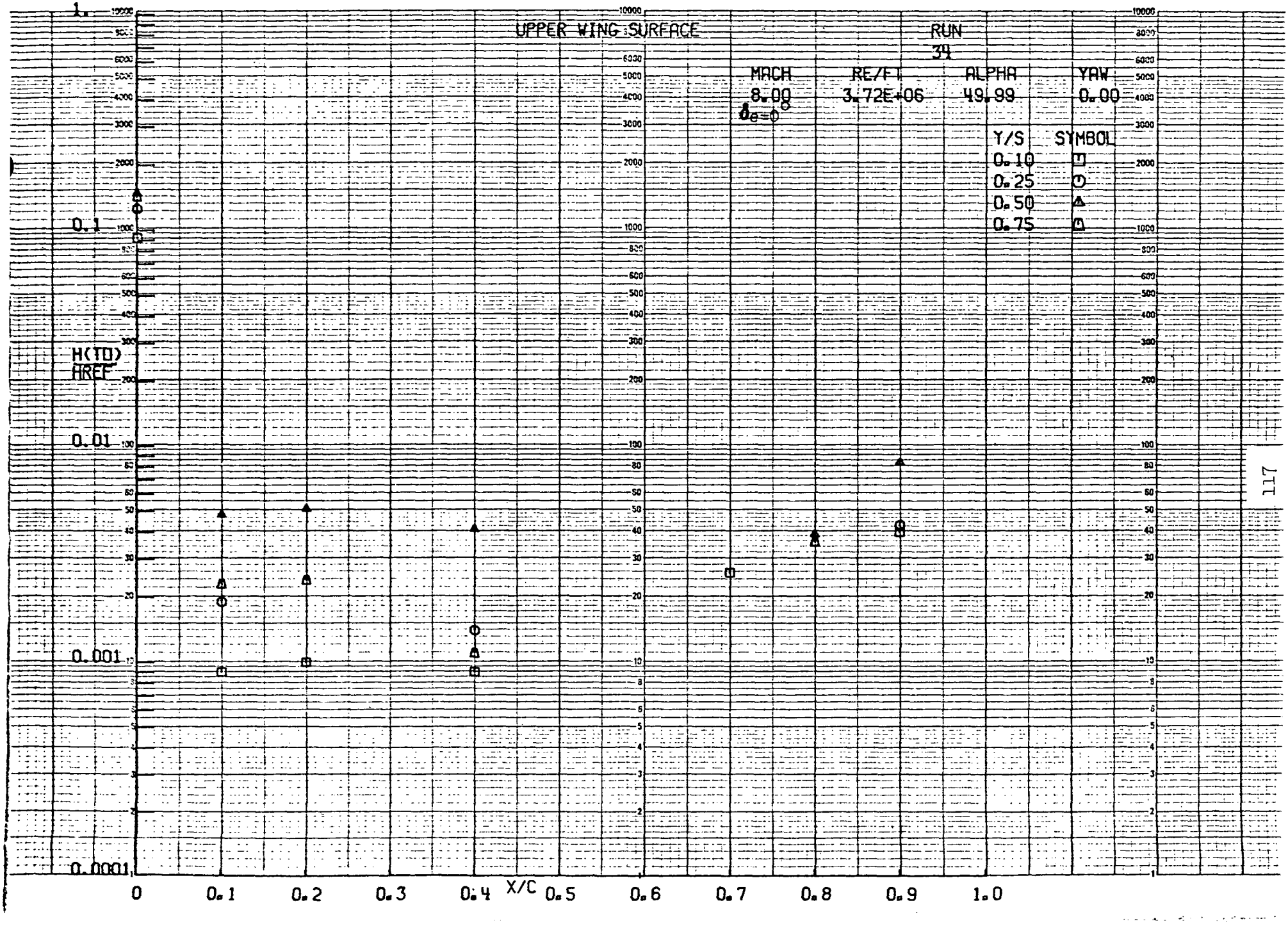

1.
UPPER WING SURFACE
RUN
31
MACH
8.00
RE/FT
3.74E+06
ALPHA
29.86
YAW
0.00
GRIT-ON
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
0.1
0.01
0.001
0.0001
H(TO)
HREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

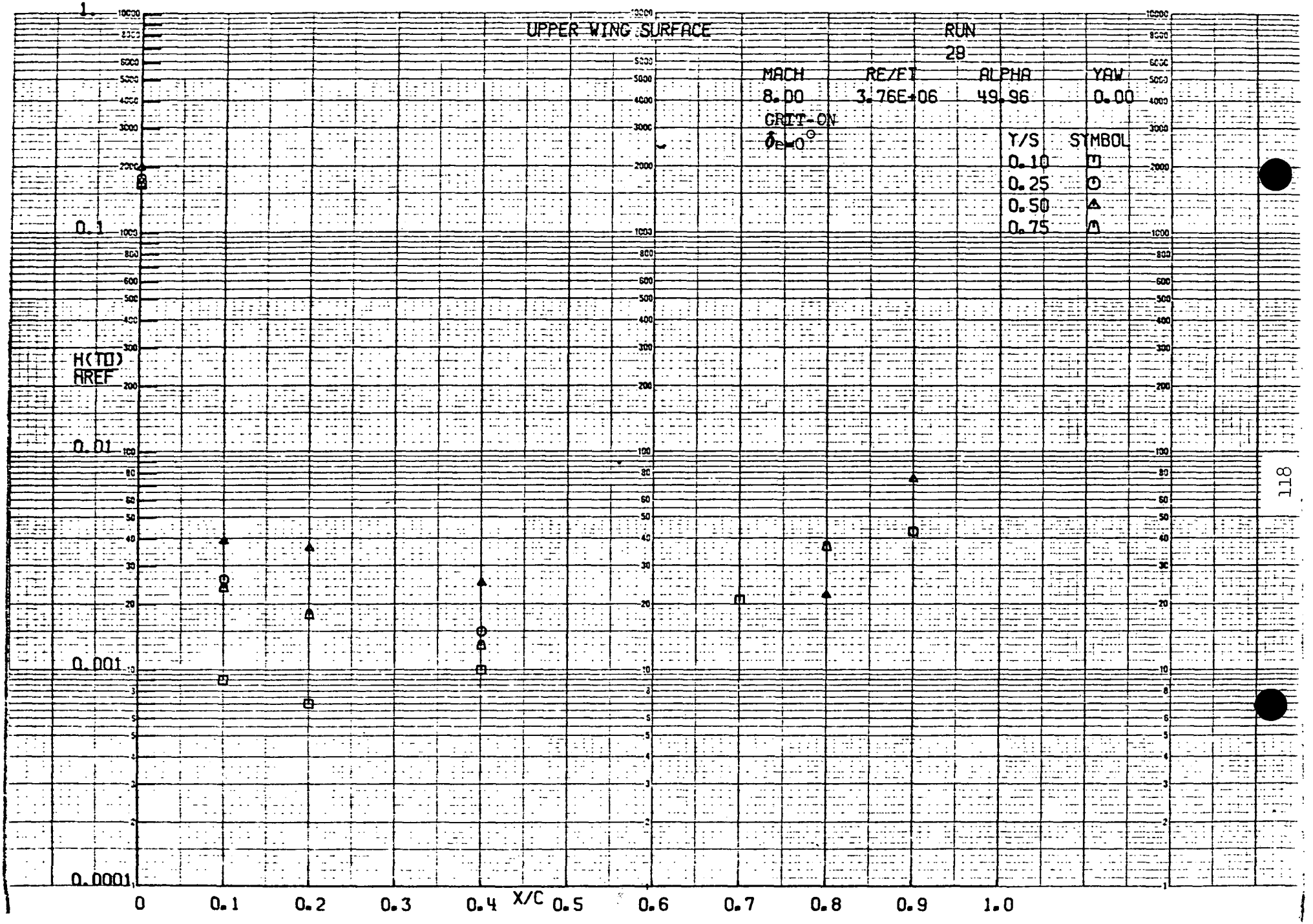

UPPER WING SURFACE
RUN
36
MACH
8.00
RE/FT
2.50E+06
ALPHA
39.98
YAW
0.00
δe=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TD)
AREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

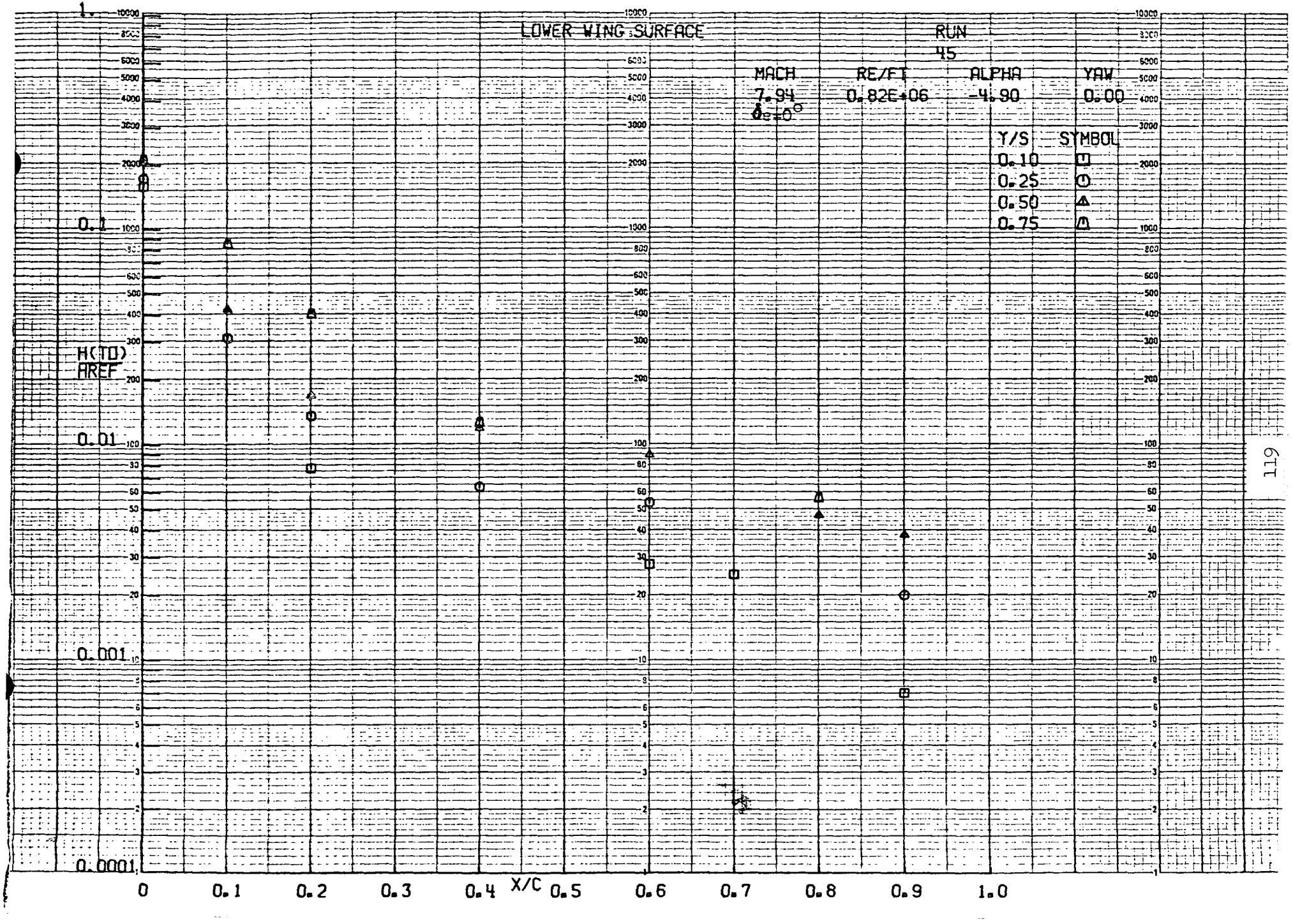

UPPER WING SURFACE
RUN
33
MACH
8.00
RE/FT
3.73E+06
ALPHA
39.97
YAW
0.00
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

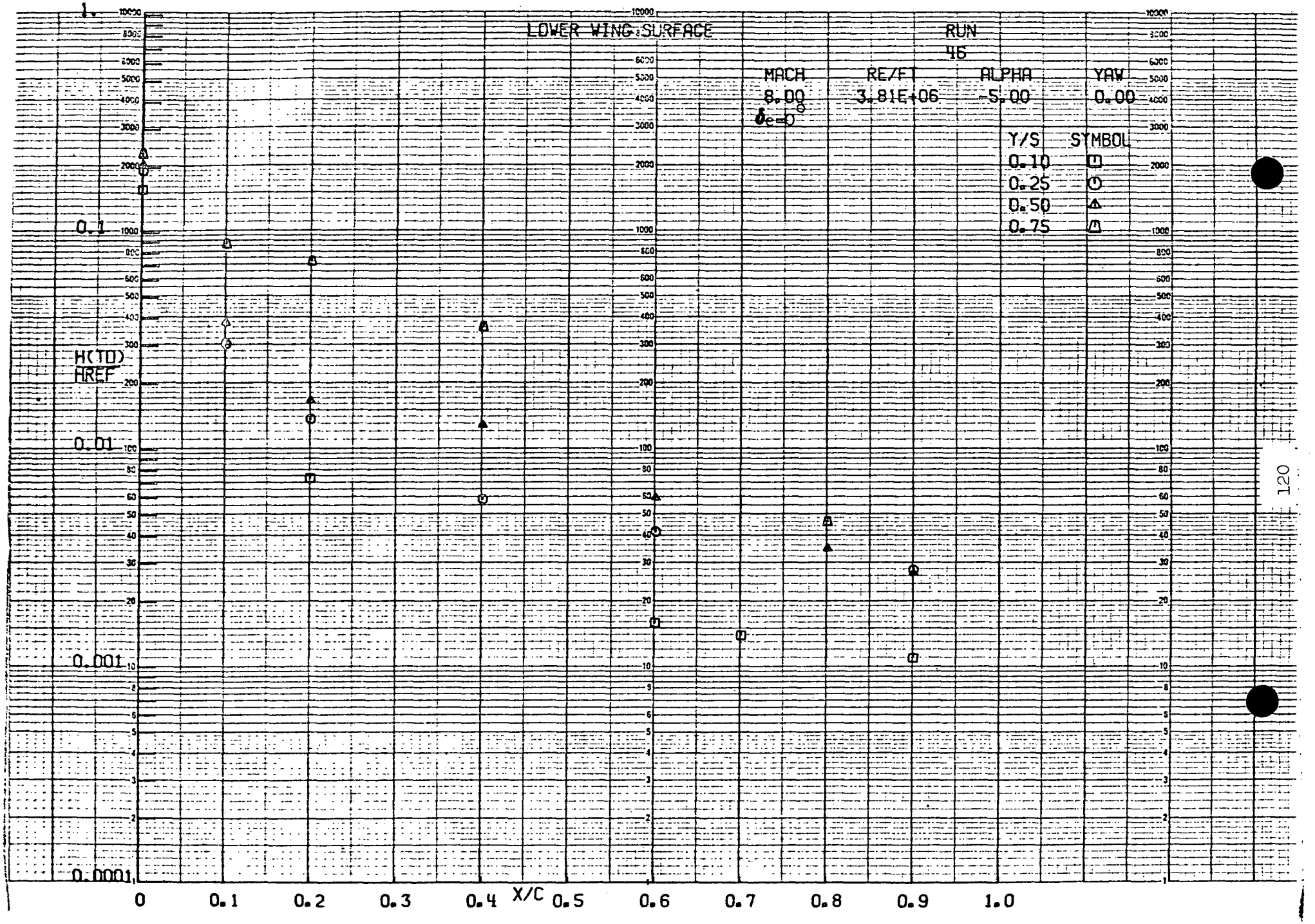

UPPER WING SURFACE
RUN
30
MACH
8.00
RE/FT
3.76E+06
ALPHA
39.98
YAW
0.00
GRIT-ON
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

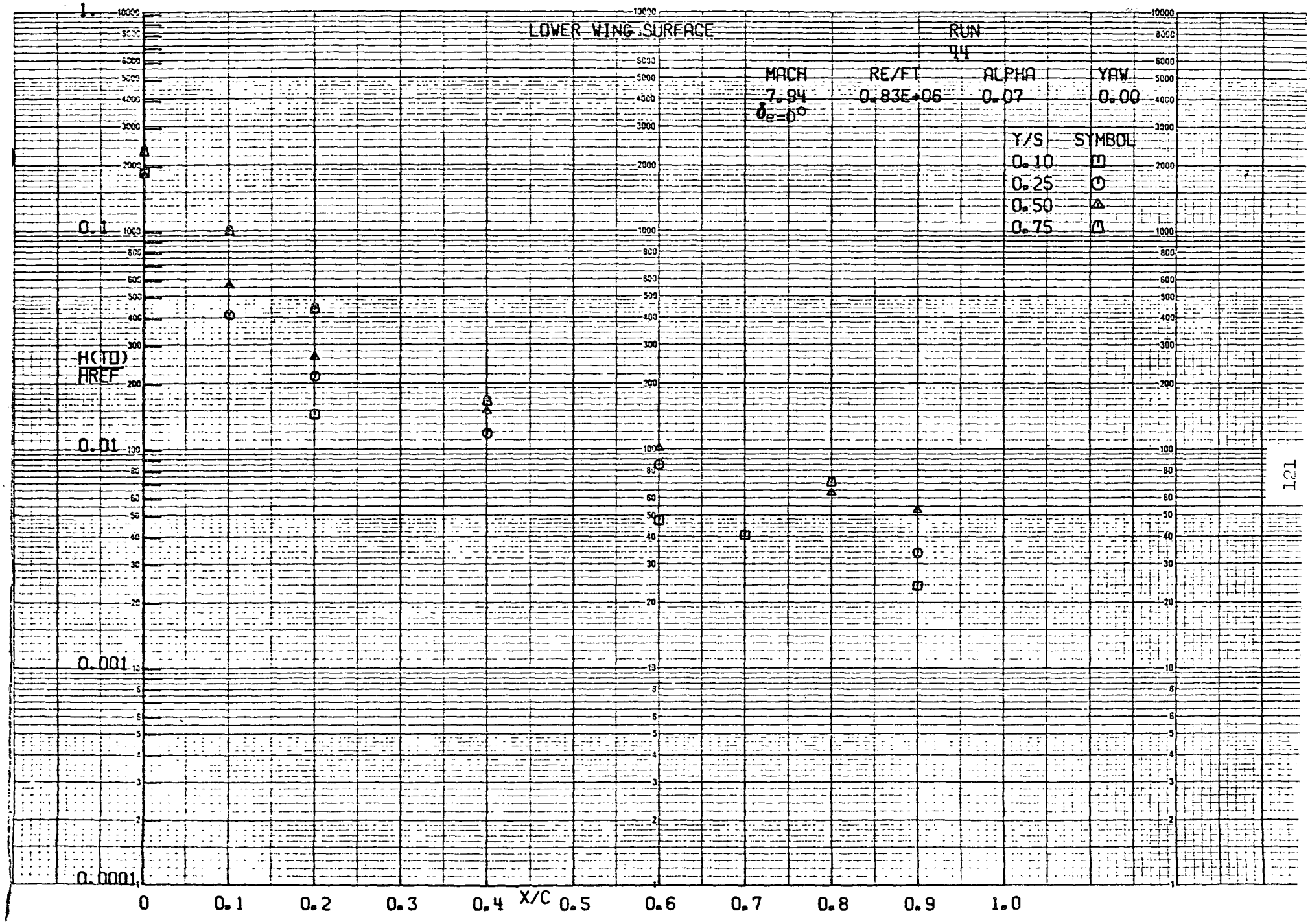

1.
UPPER WING SURFACE
RUN
35
MACH
8.00
RE/FT
2.52E+06
ALPHA
49.99
YAW
0.00
δ_e=0°
Y/S SYMBOL
0.10
0.25
0.50
0.75
0.1
H(TO)
AREF
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0
116

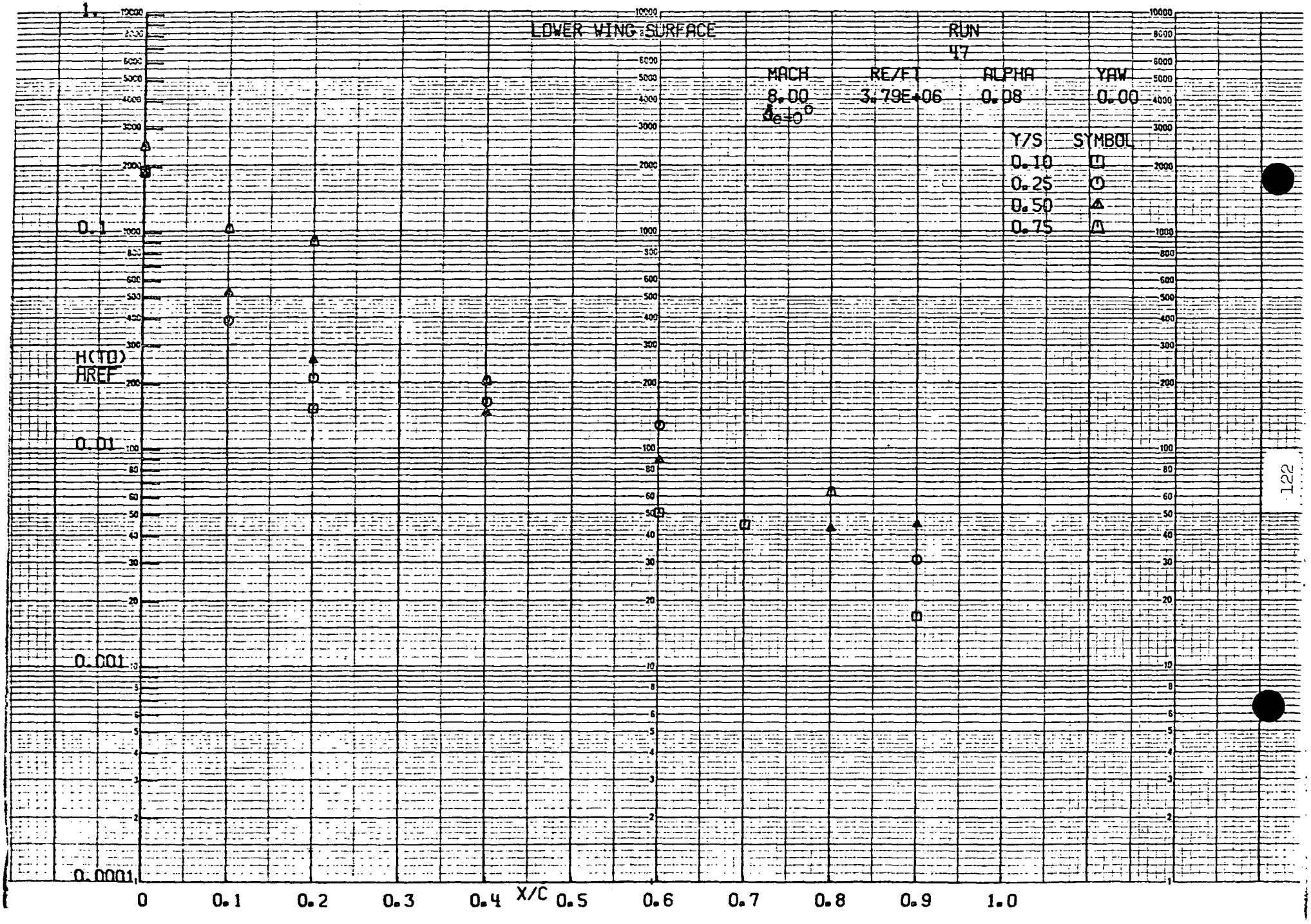

UPPER WING SURFACE
RUN
34
MACH
8.00
RE/FT
3.72E+06
ALPHA
49.99
YAW
0.00
δ_e=0
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

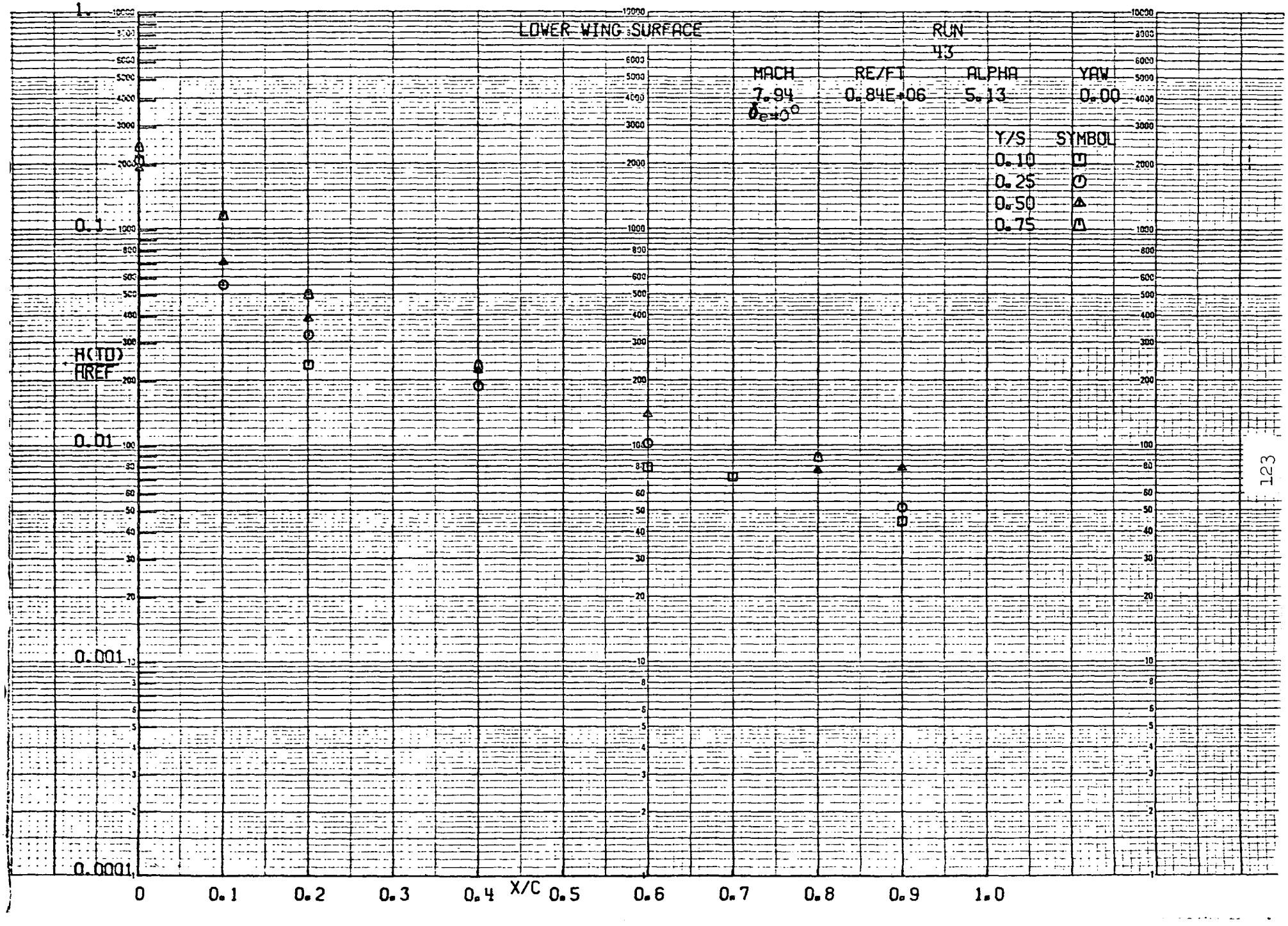

UPPER WING SURFACE
RUN
29
MACH
8.00
RE/FT
3.76E+06
ALPHA
49.96
YAW
0.00
CRIT-ON
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TO)
AREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

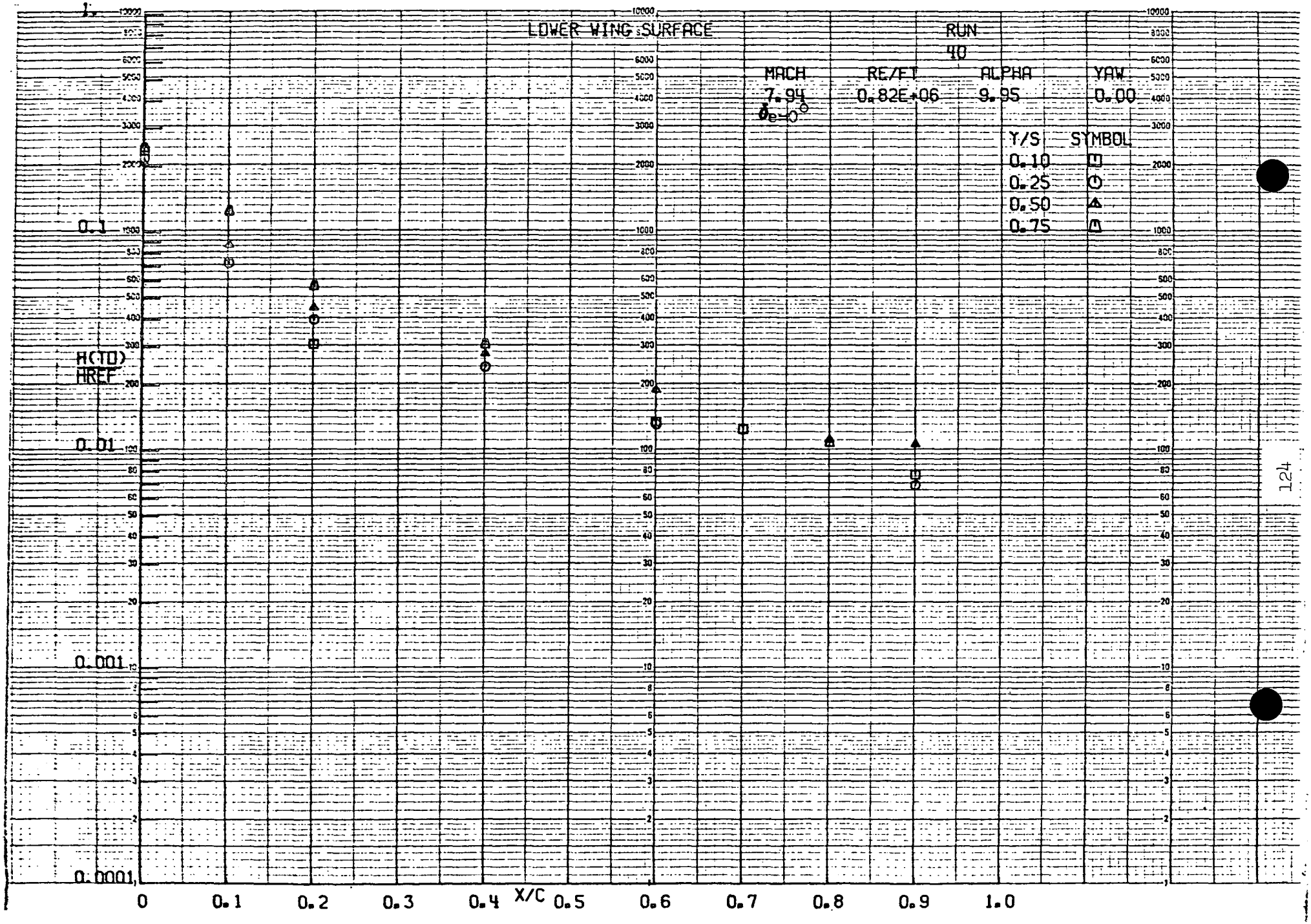

LOWER WING SURFACE
RUN
45
MACH
7.94
δe=0°
RE/FT
0.82E+06
ALPHA
-4.90
YAW
0.00
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

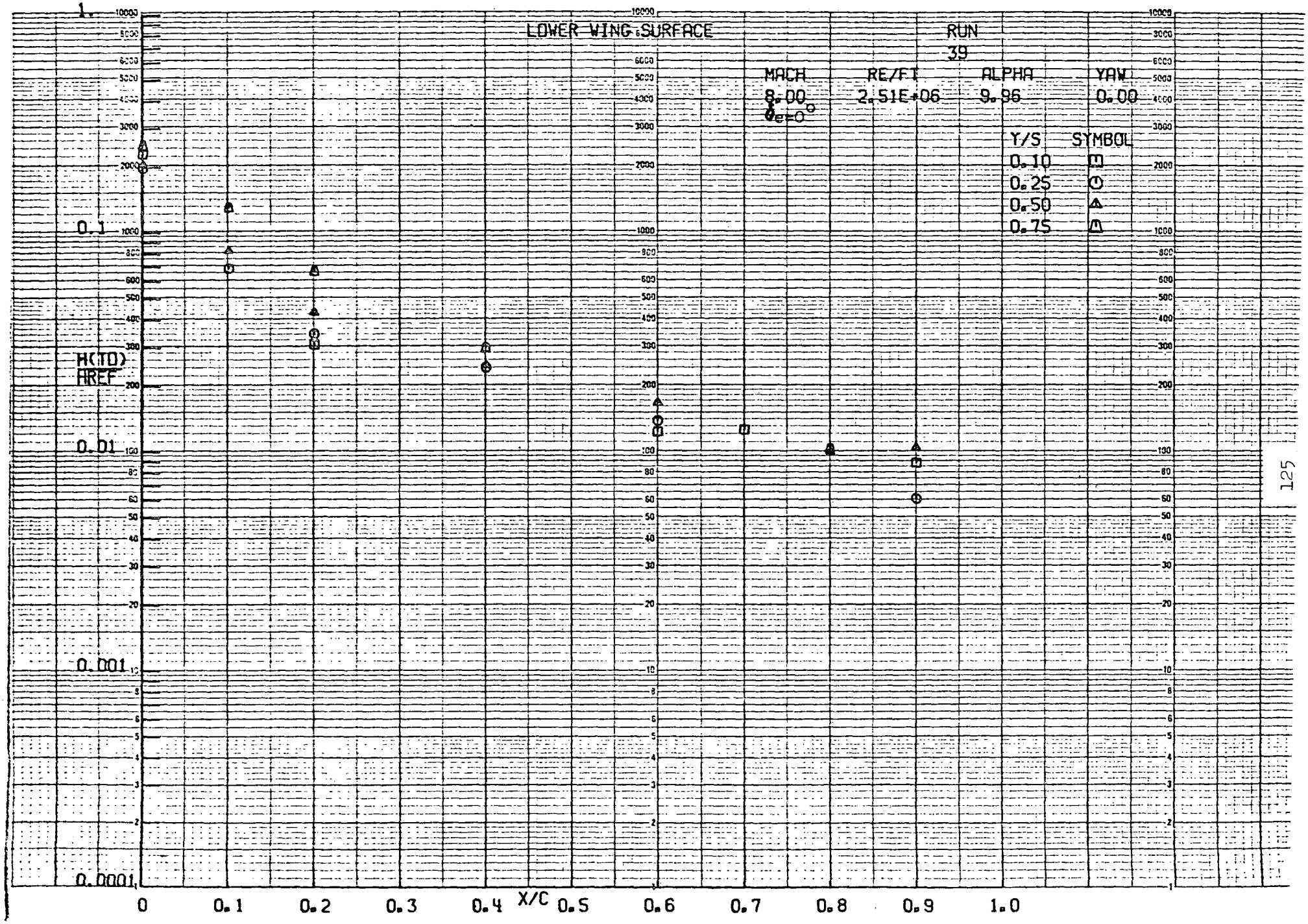

LOWER WING SURFACE
RUN
46
MACH
8.00
RE/FT
3.81E+06
ALPHA
-5.00
YAW
0.00
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

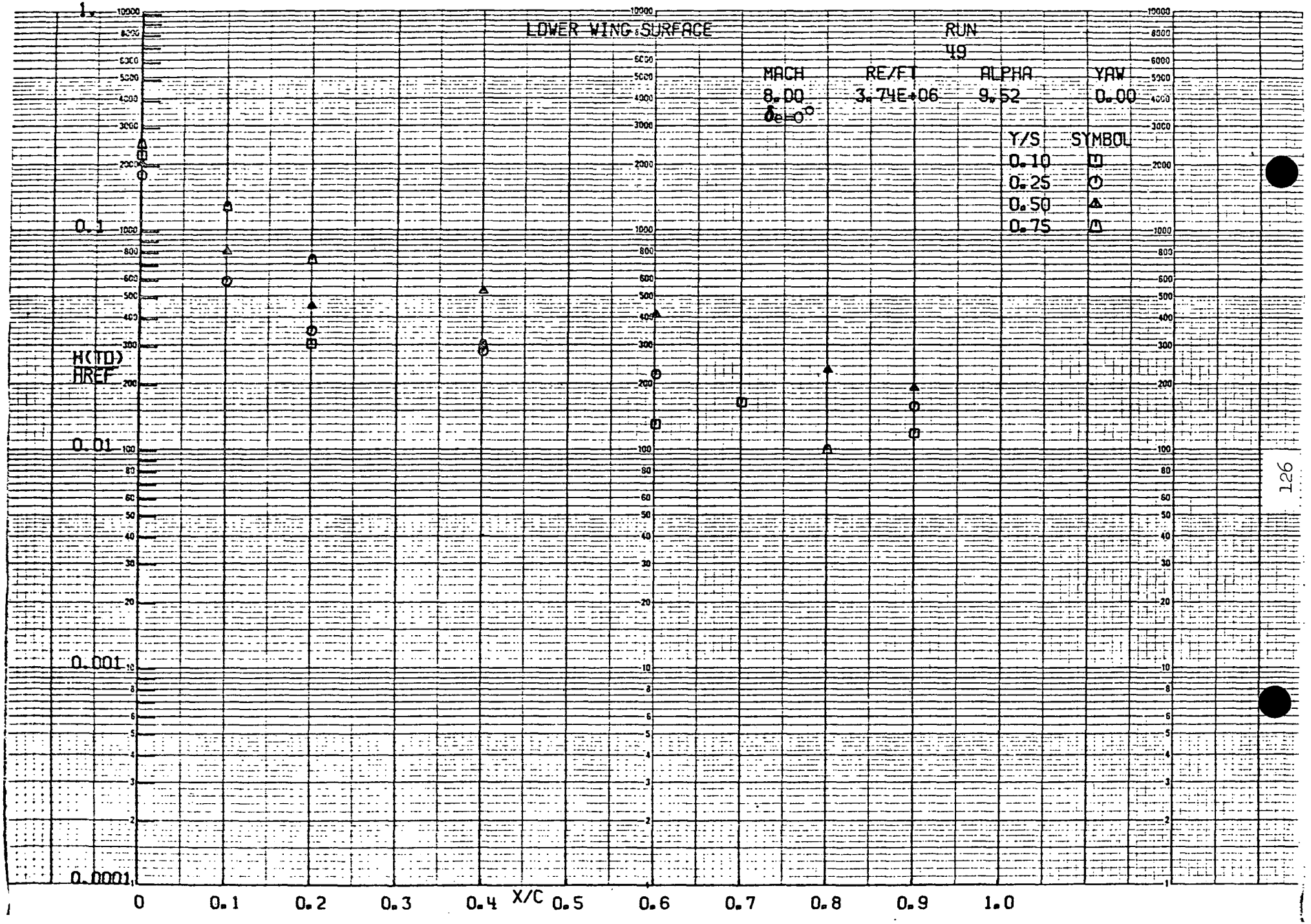

LOWER WING SURFACE
RUN
44
MACH
7.94
RE/FT
0.83E+06
ALPHA
0.07
YAW
0.00
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

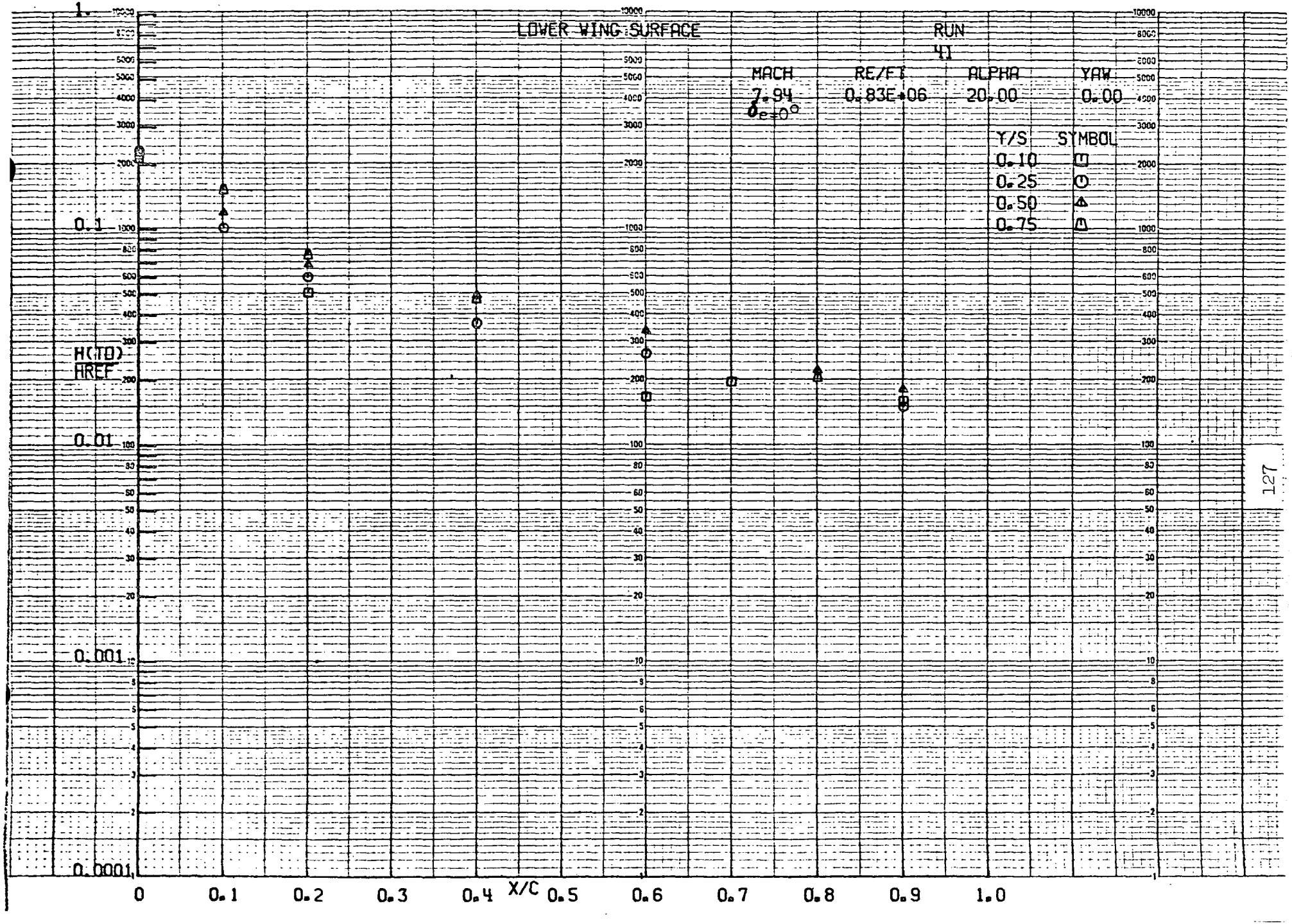

1.
LOWER WING SURFACE
RUN
47
MACH
8.00
RE/FT
3.79E+06
ALPHA
0.08
YAW
0.00
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
0.1
0.01
0.001
0.0001
H(TO)
AREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

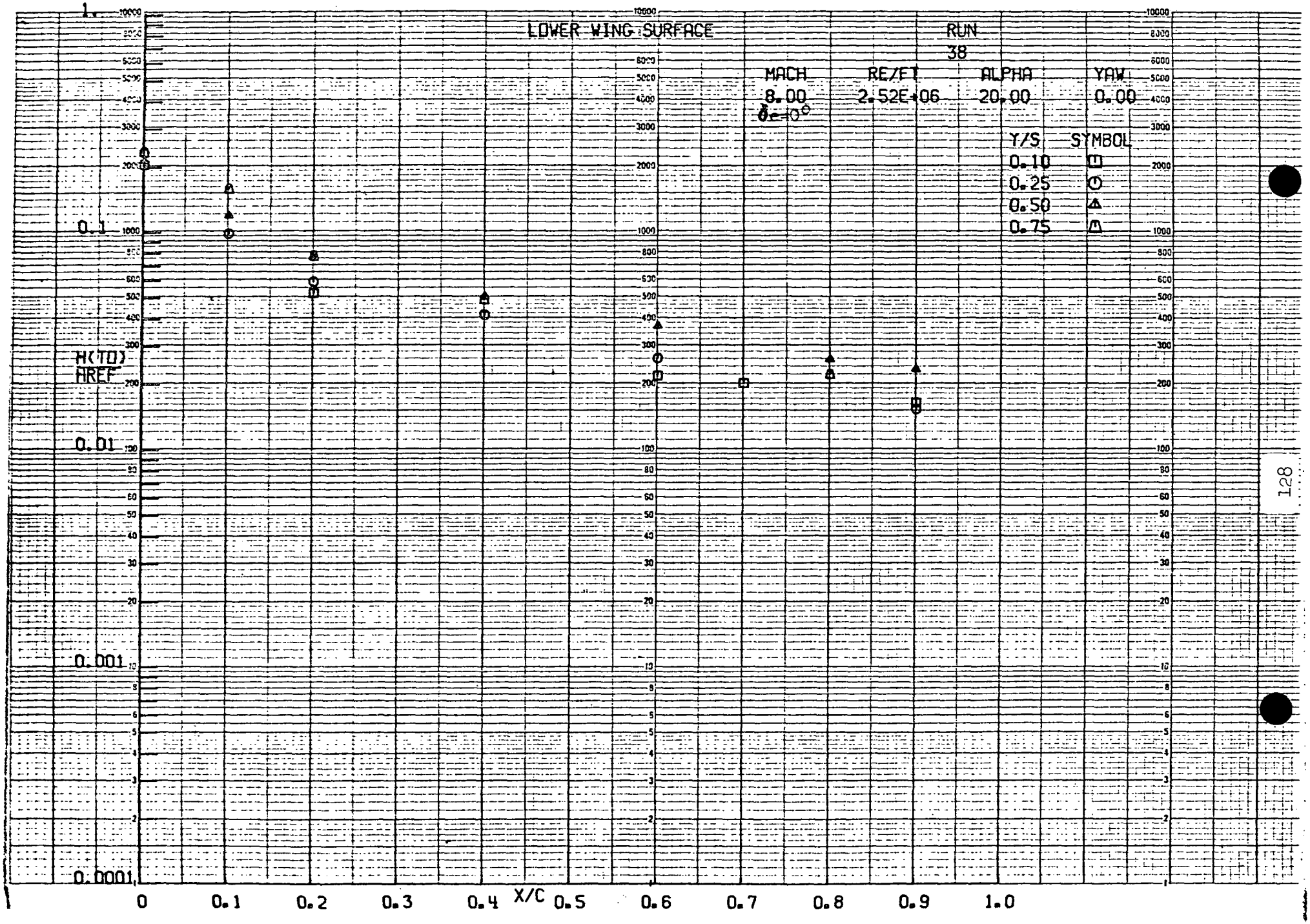

LOWER WING SURFACE
RUN
43
MACH
7.94
RE/FT
0.84E+06
ALPHA
5.13
YAW
0.00
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0
123

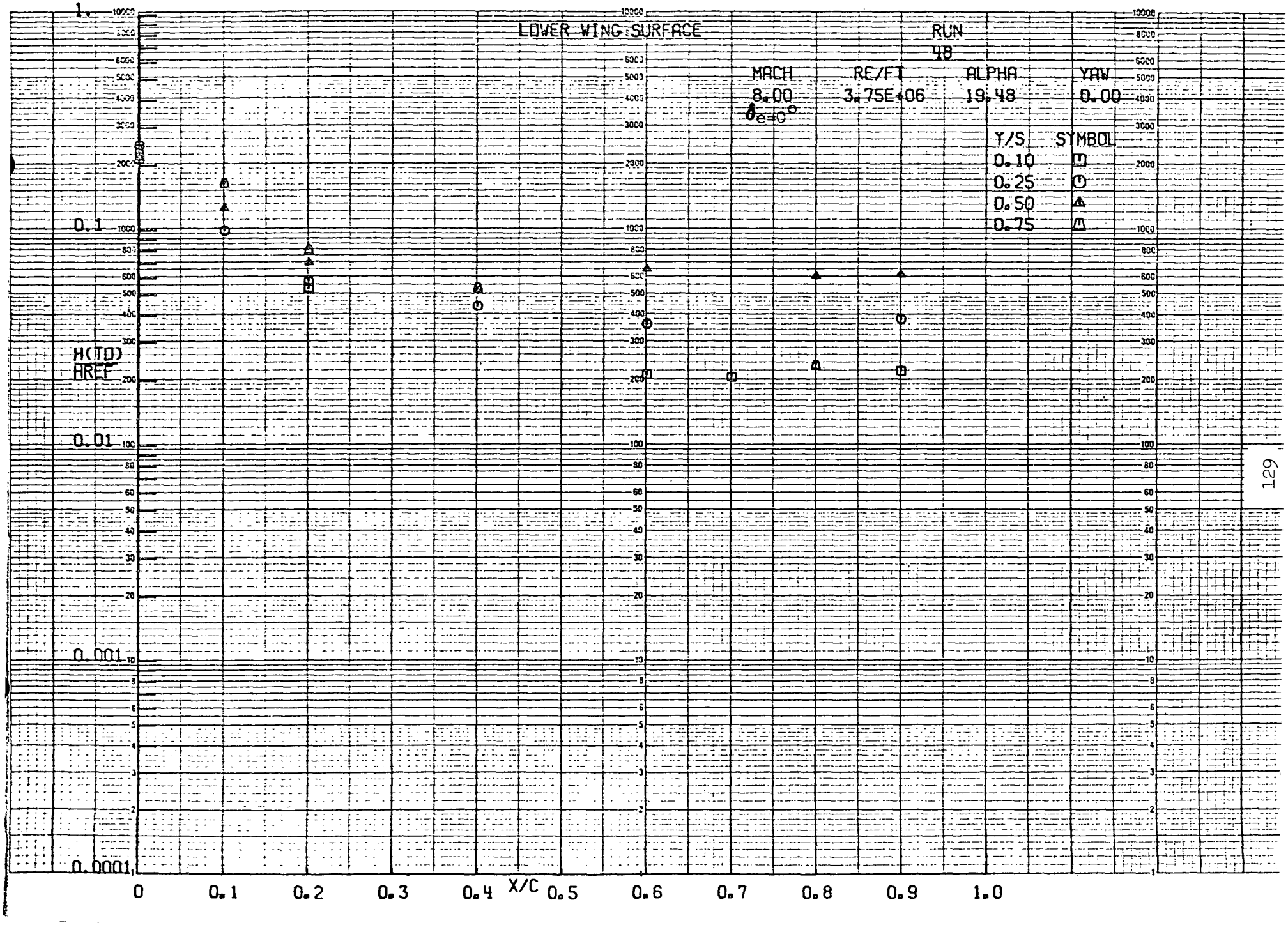

LOWER WING SURFACE
RUN
40
MACH
7.94
RE/FT
0.82E+06
ALPHA
9.95
YAW
0.00
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0
124

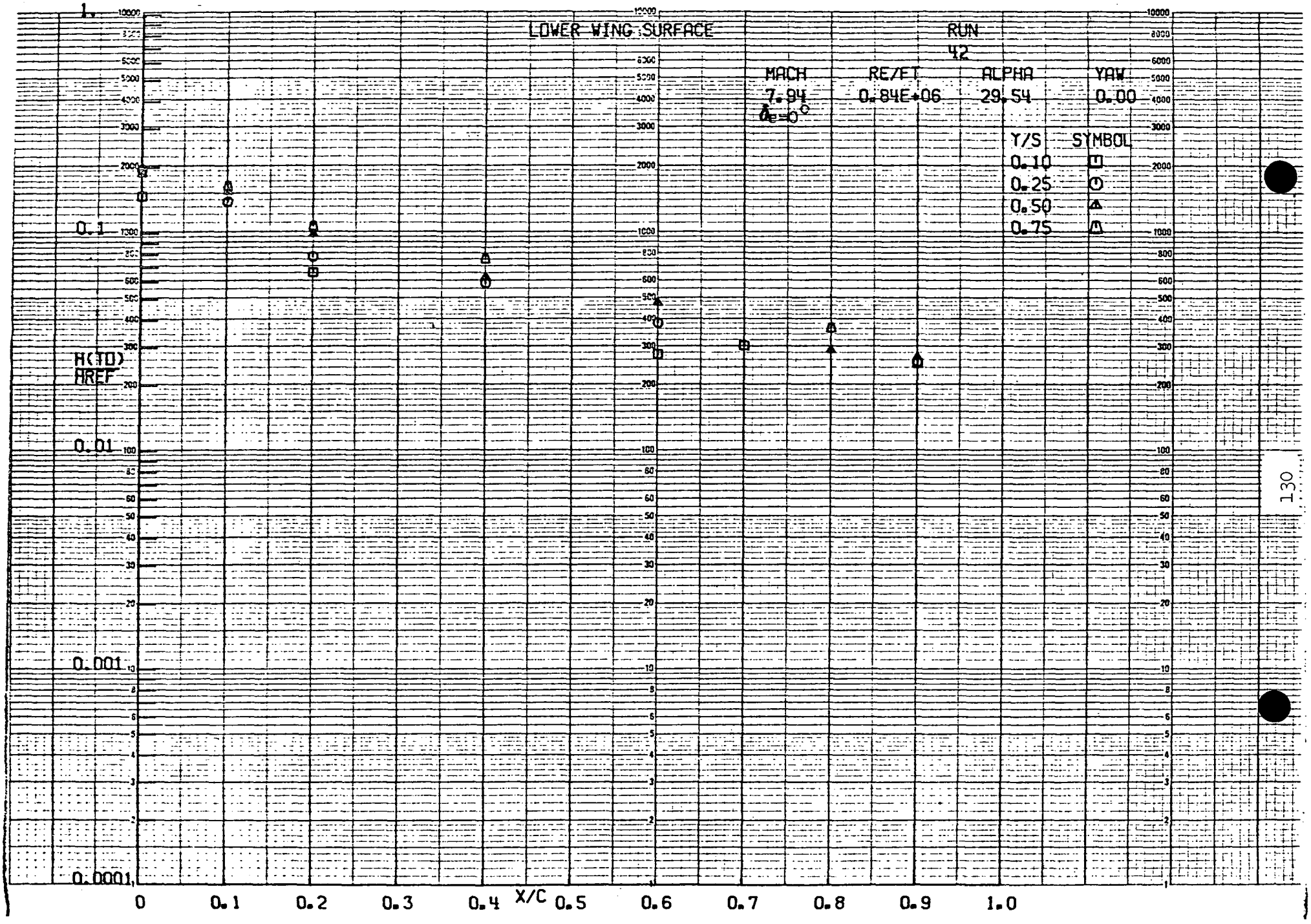

LOWER WING SURFACE
RUN
39
MACH
8.00
RE/FT
2.51E+06
ALPHA
9.96
YAW
0.00
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

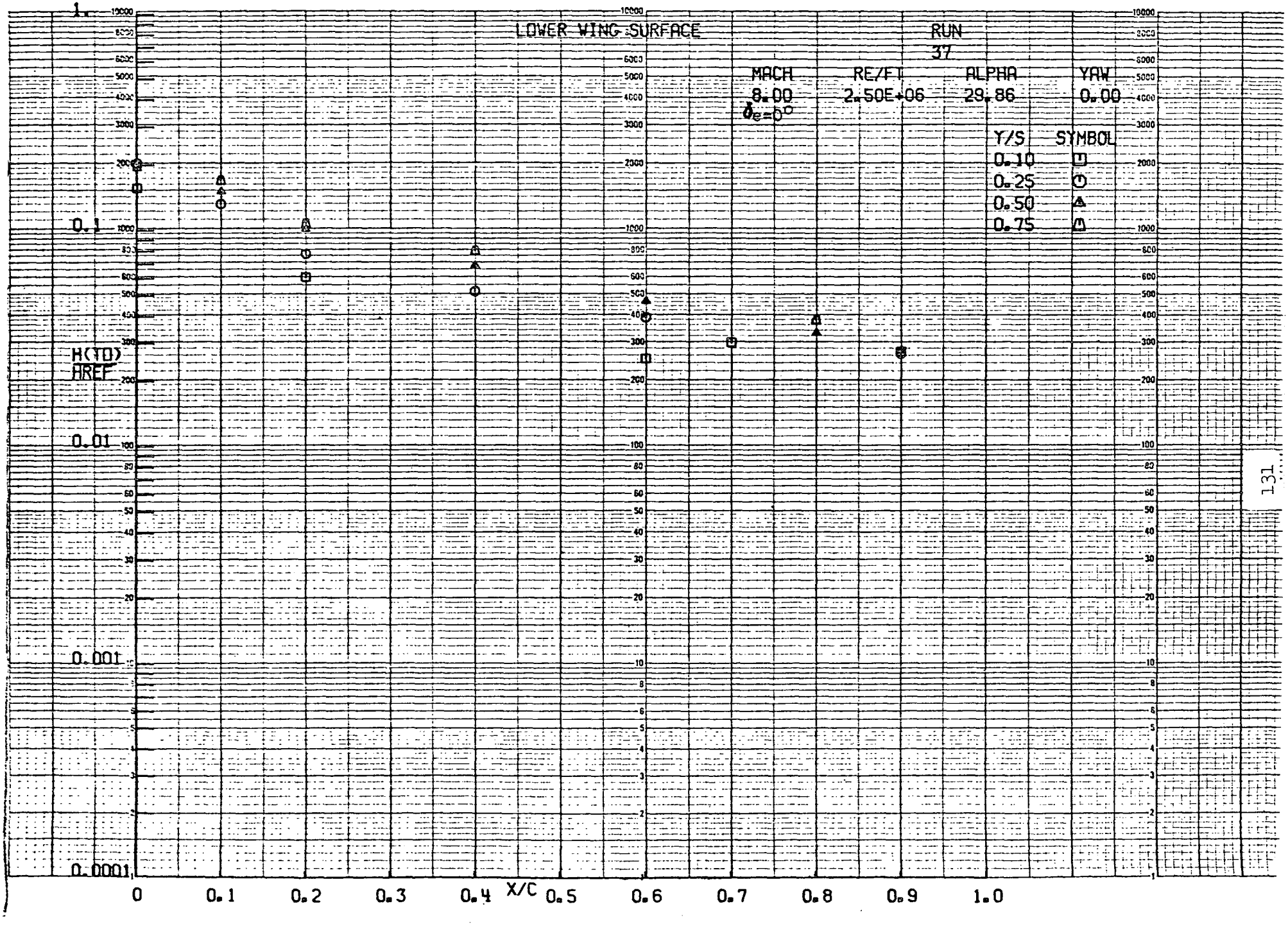

LOWER WING SURFACE
RUN
49
MACH
8.00
RE/FT
3.74E+06
ALPHA
9.52
YAW
0.00
δe=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

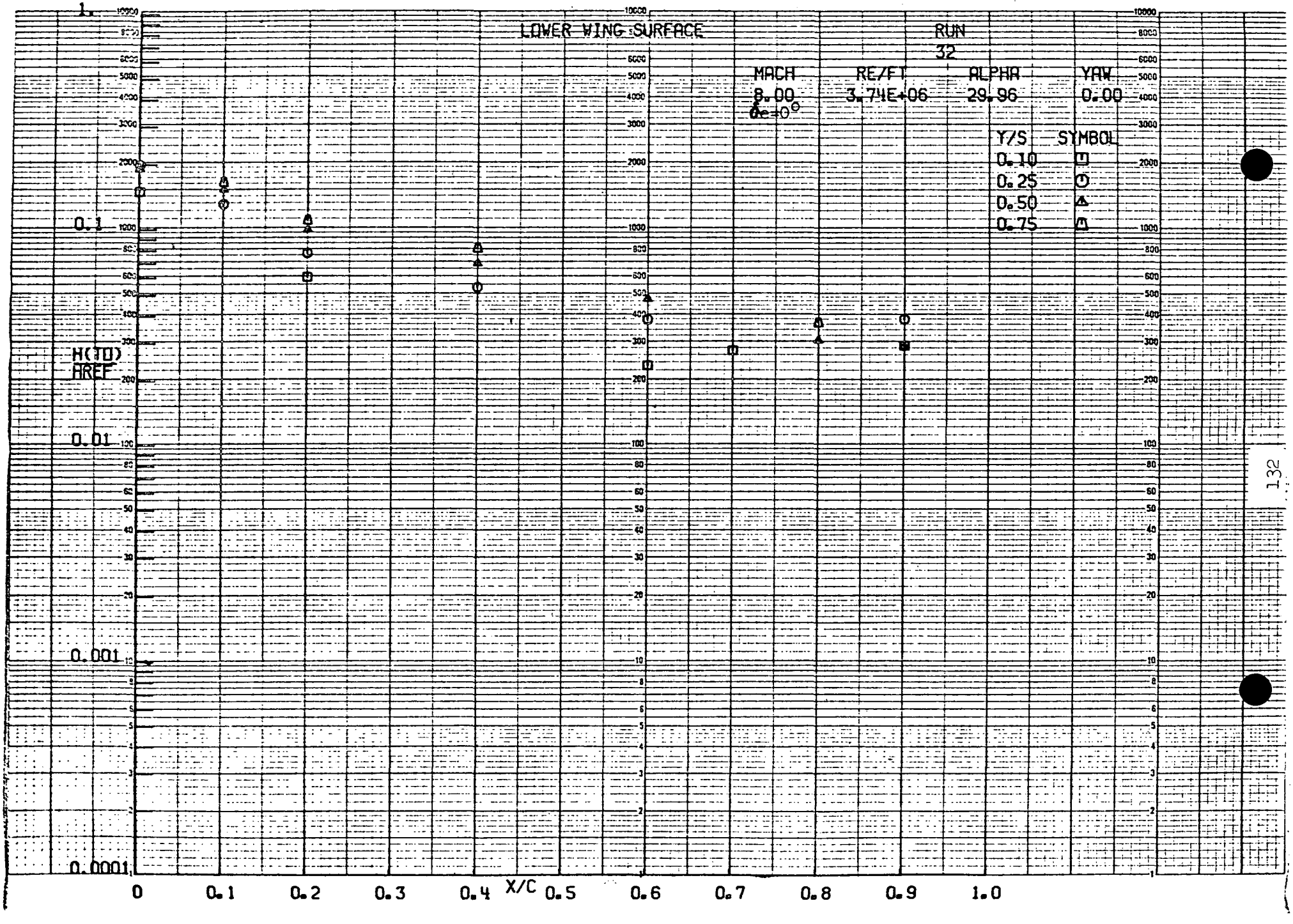

LOWER WING SURFACE
RUN
41
MACH
7.94
RE/FT
0.83E+06
ALPHA
20.00
YAW
0.00
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

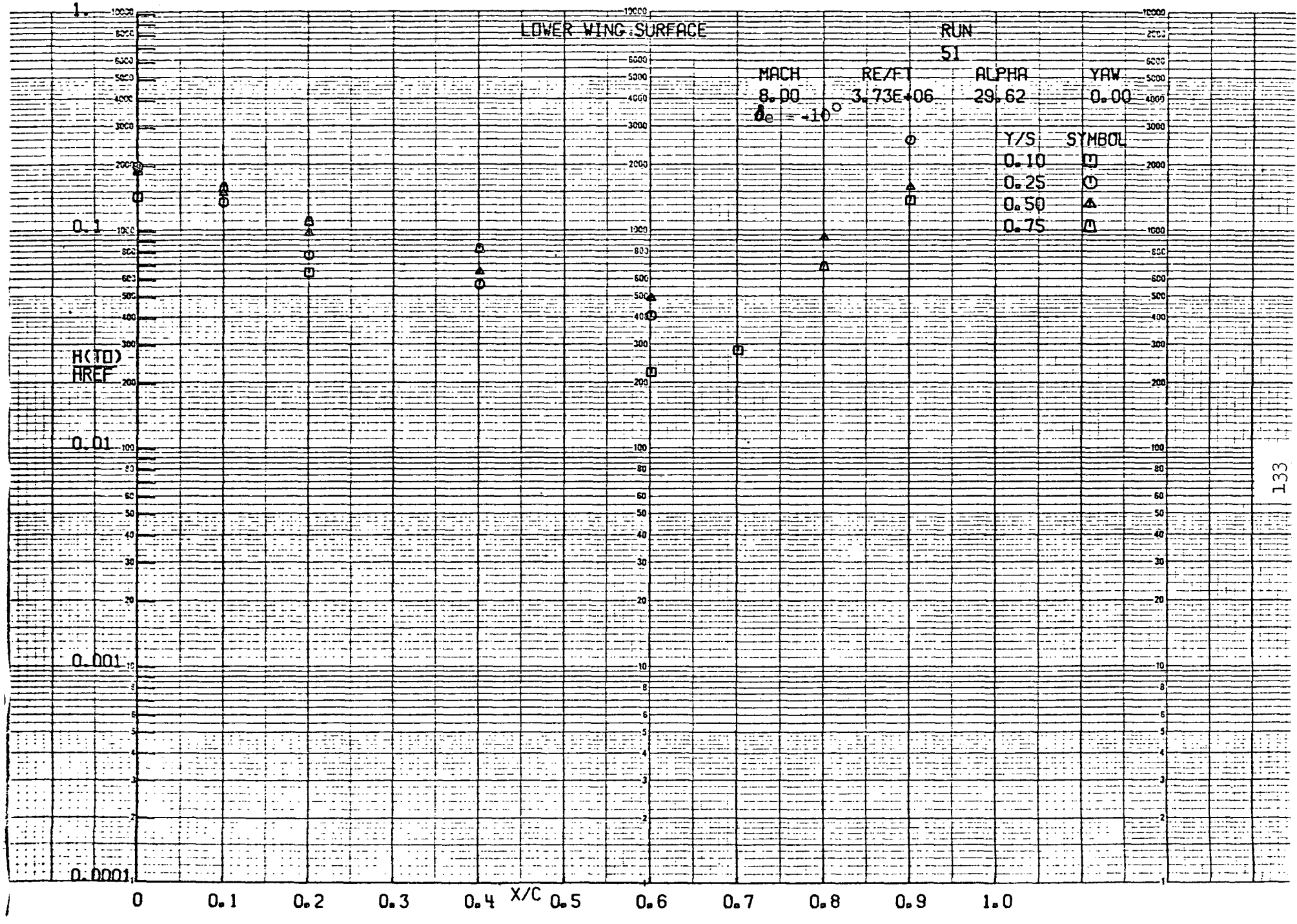

LOWER WING SURFACE
RUN
38
MACH
8.00
RE/FT
2.52E+06
ALPHA
20.00
YAW
0.00
δe=40°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

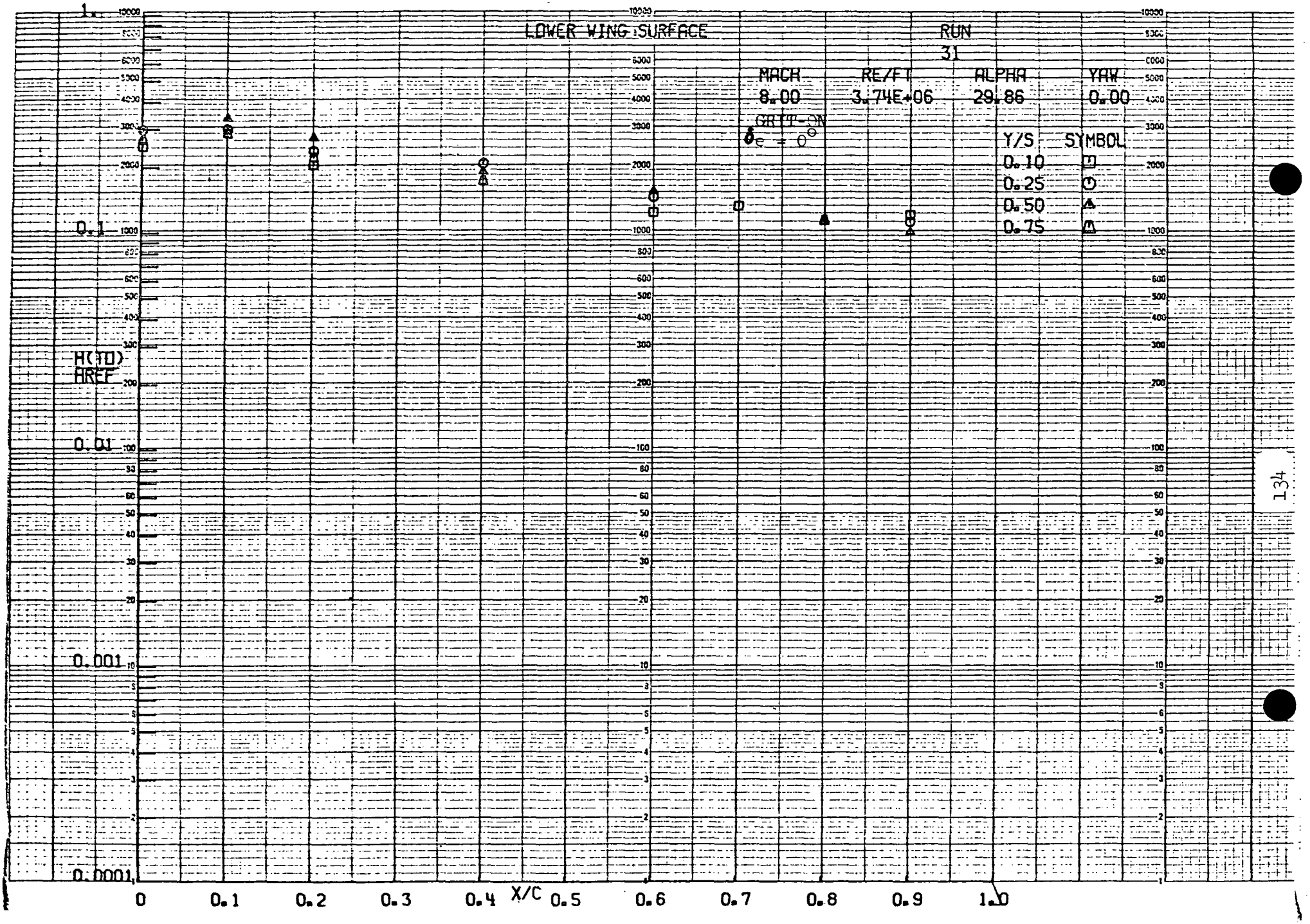

1.
LOWER WING SURFACE
RUN
48
MACH
8.00
RE/FT
3.75E+06
ALPHA
19.48
YAW
0.00
$\delta_{e=0}$°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
0.1
0.01
0.001
0.0001
H(TD)
AREF
X/C
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0

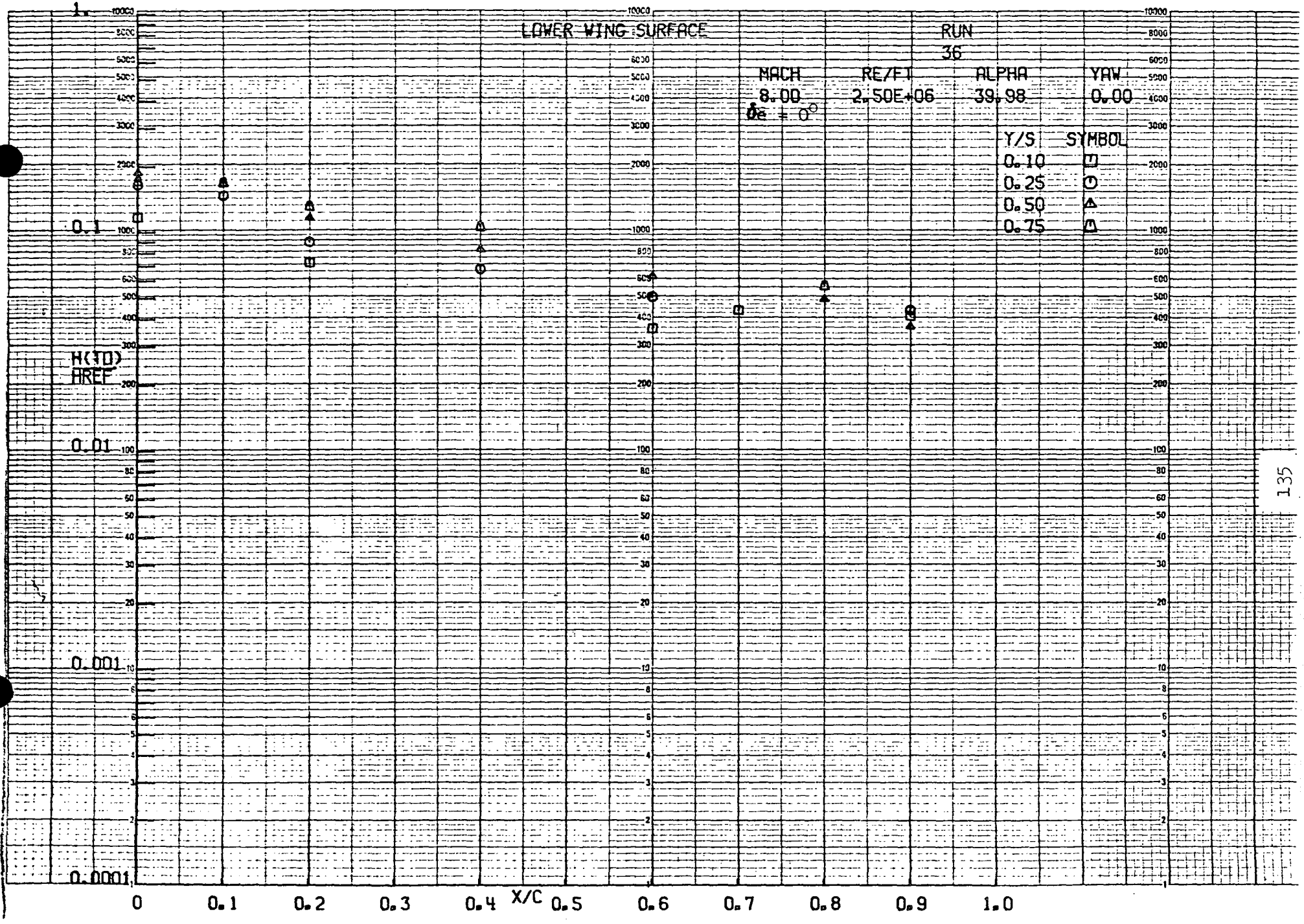

LOWER WING SURFACE
RUN
42
MACH
7.94
RE/FT
0.84E+06
ALPHA
29.54
YAW
0.00
δ_e=0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

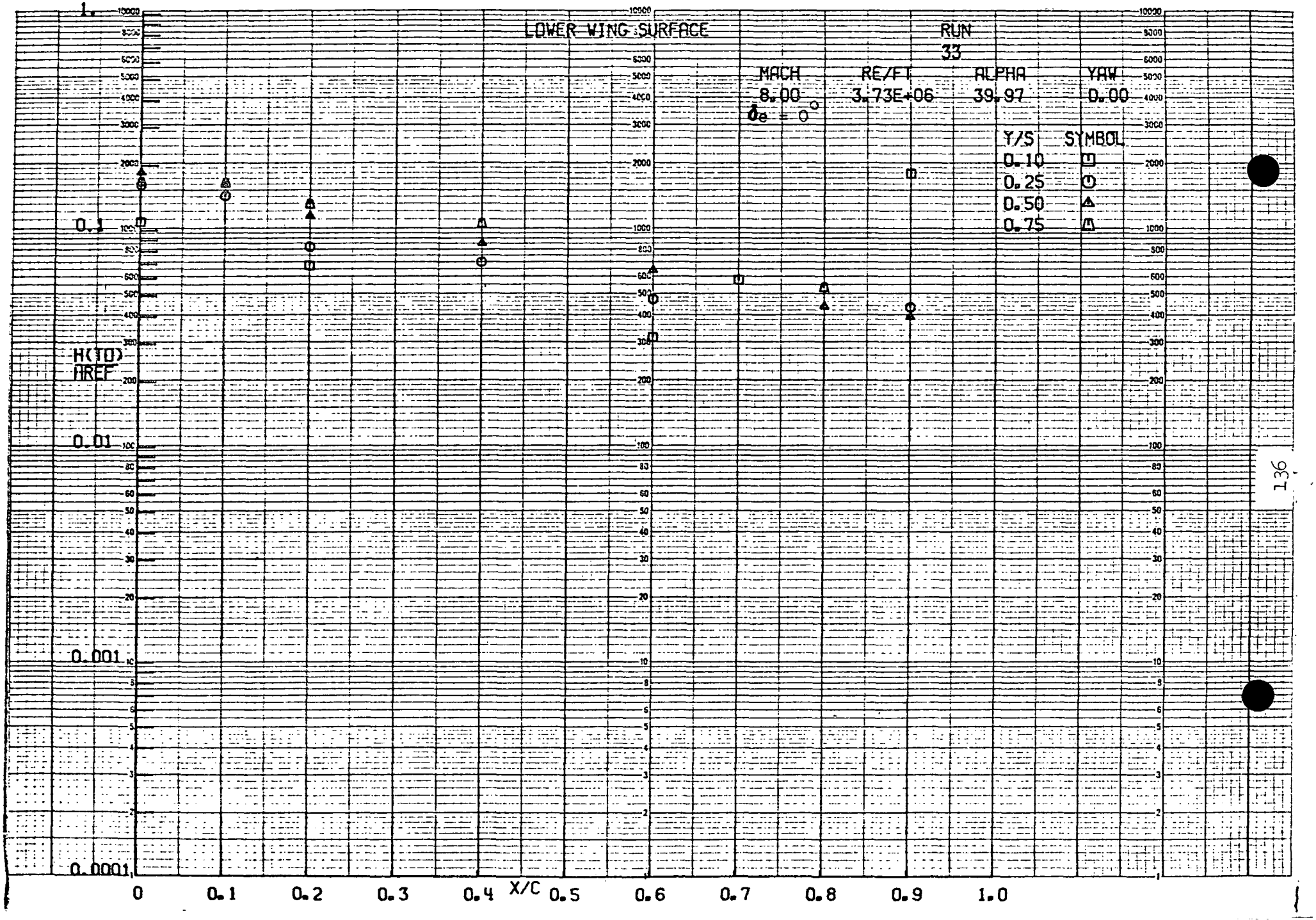

LOWER WING SURFACE
RUN
37
MACH
8.00
RE/FT
2.50E+06
ALPHA
29.86
YAW
0.00
δ_e=0°
Y/S SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TO)
HREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

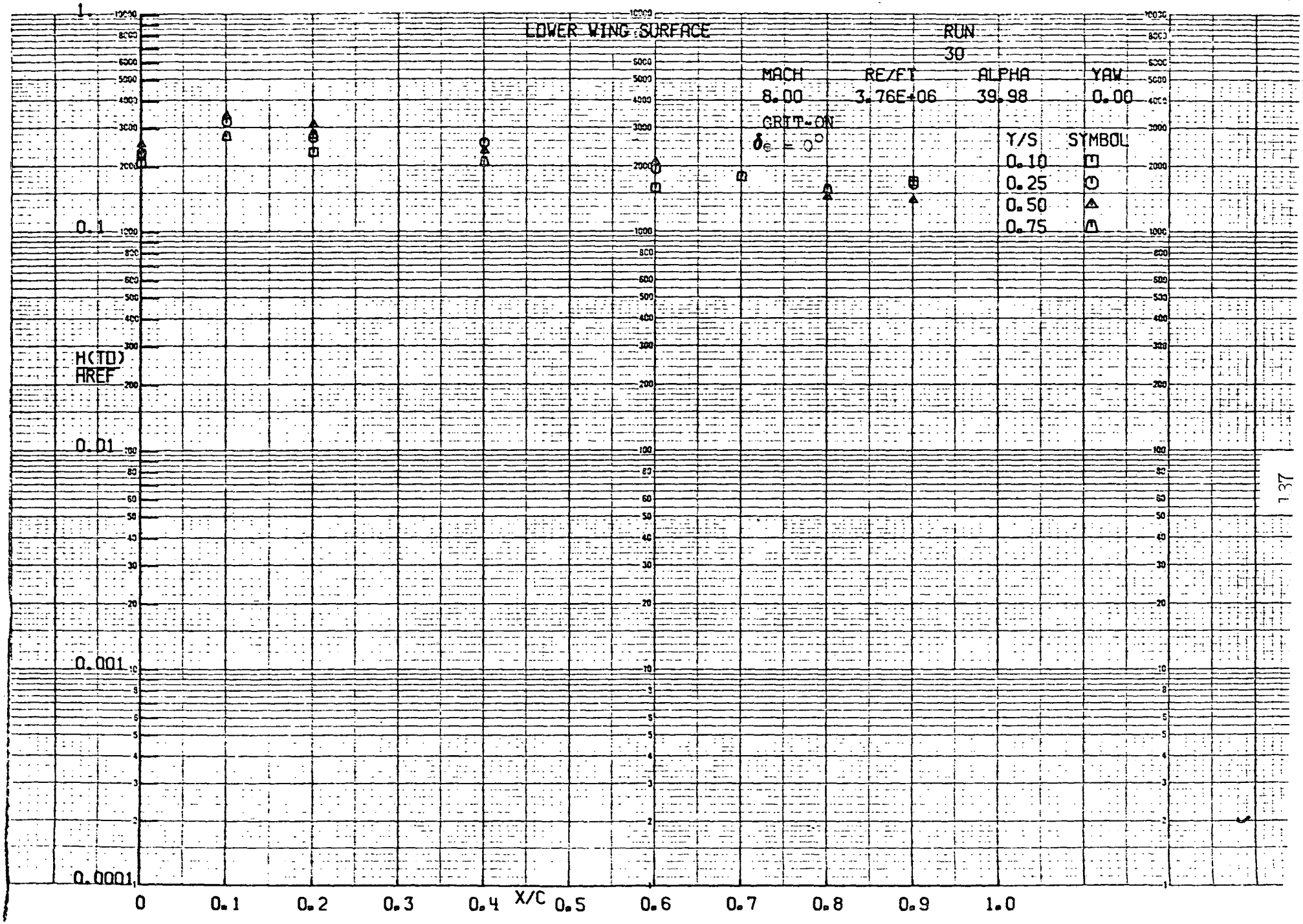

LOWER WING SURFACE
RUN
32
MACH
8.00
δe=0°
RE/FT
3.74E+06
ALPHA
29.96
YAW
0.00
Y/S SYMBOL
0.10
0.25
0.50
0.75
H(TO)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

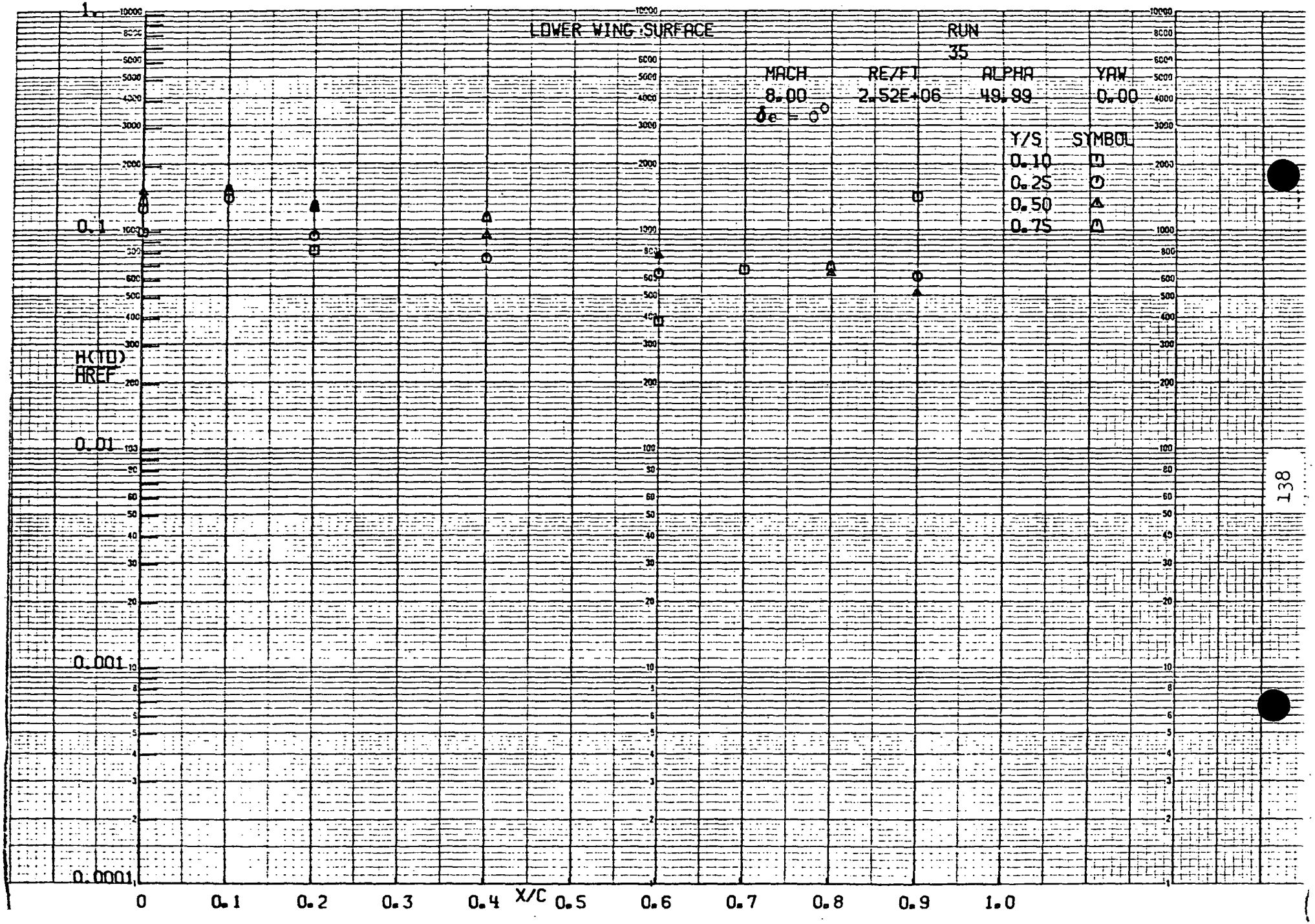

1.
LOWER WING SURFACE
RUN
51
MACH
8.00
RE/FT
3.73E+06
ALPHA
29.62
YAW
0.00
δ_e = -10°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
0.1
A(TO)
AREF
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

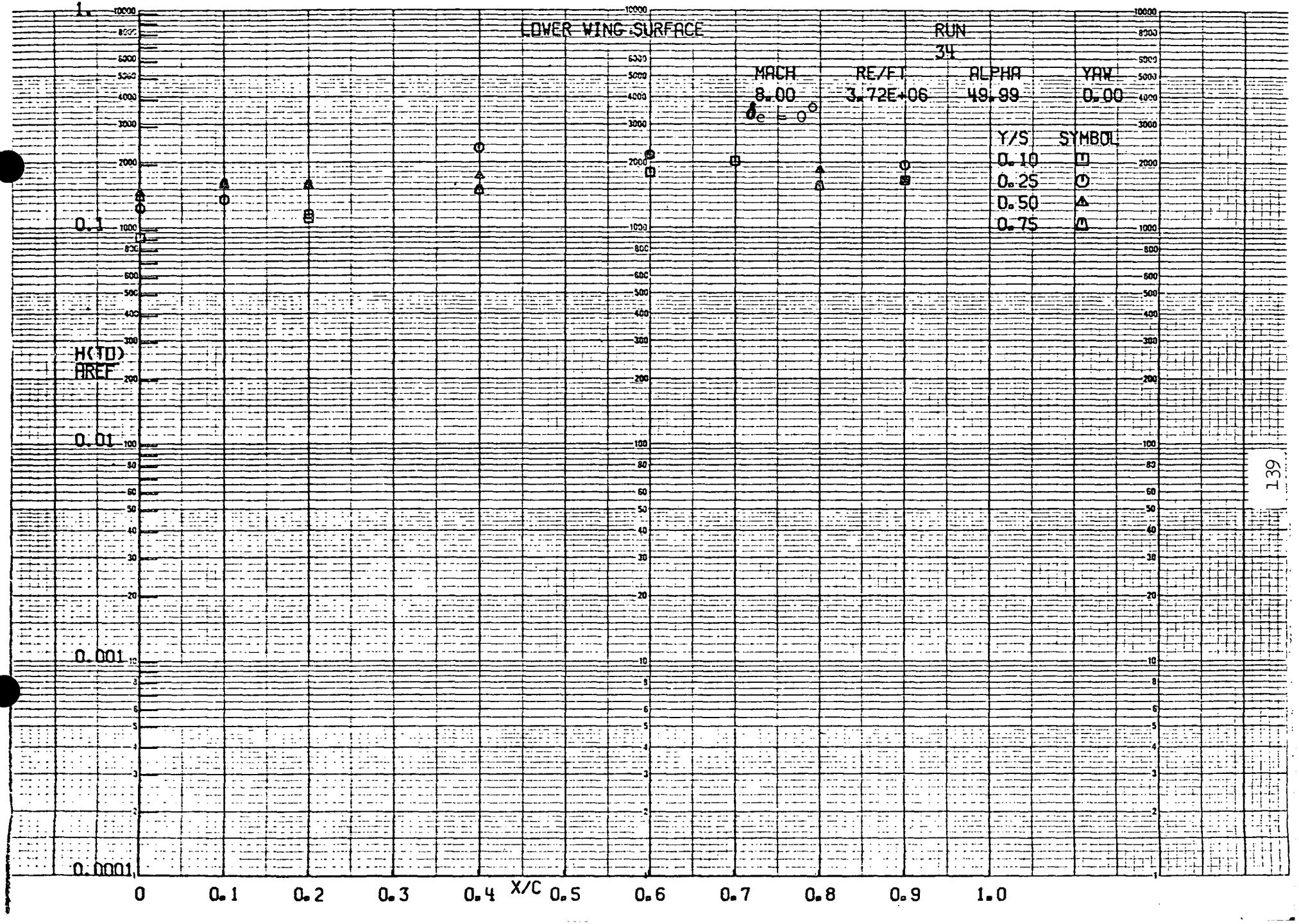

LOWER WING SURFACE
RUN
31
MACH
8.00
RE/FT
3.74E+06
ALPHA
29.86
YAW
0.00
GRIT-ON
$\delta_e = 0^\circ$
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

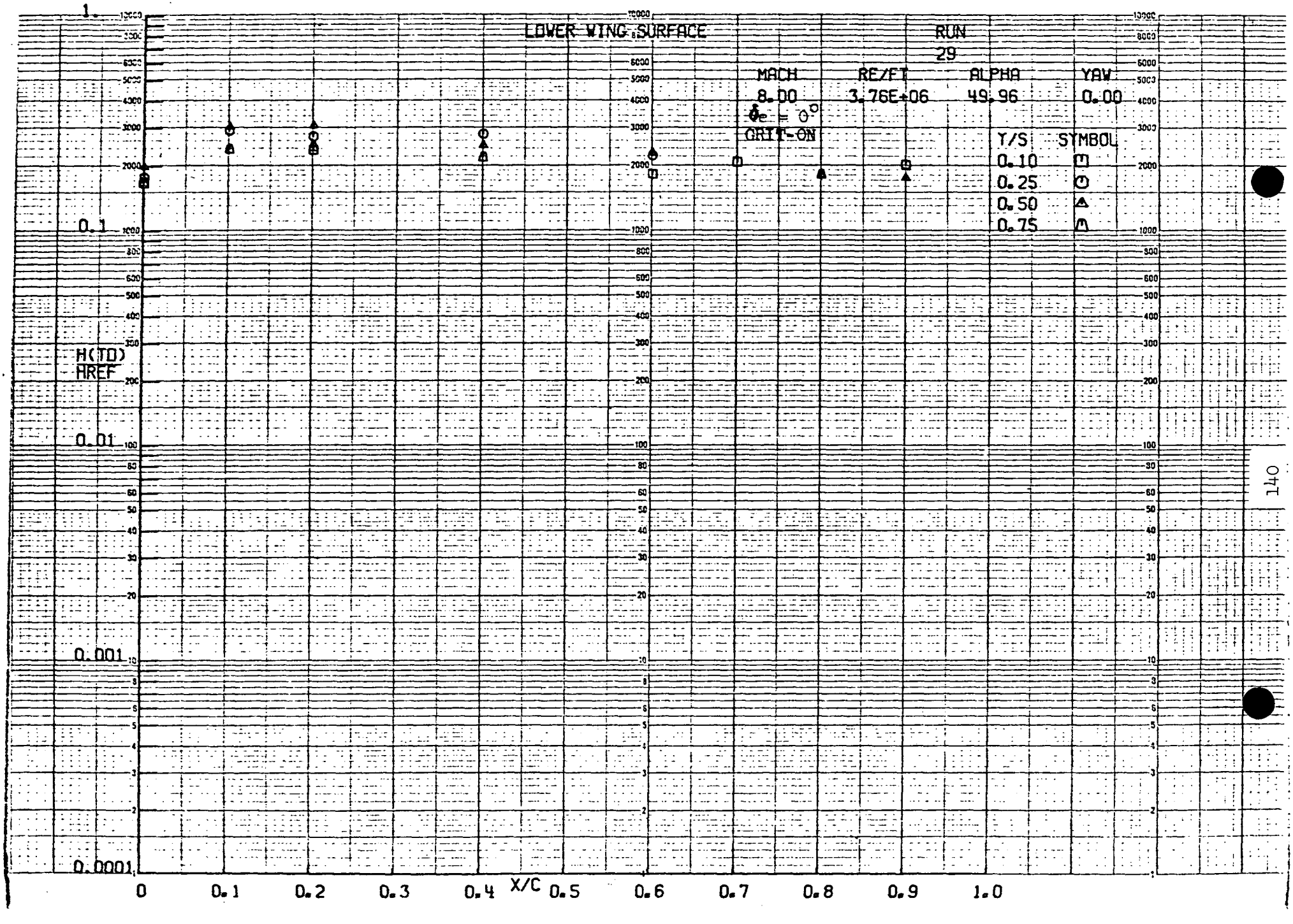

LOWER WING SURFACE
RUN
36
MACH
8.00
RE/FT
2.50E+06
ALPHA
39.98
YAW
0.00
δe = 0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(3D)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

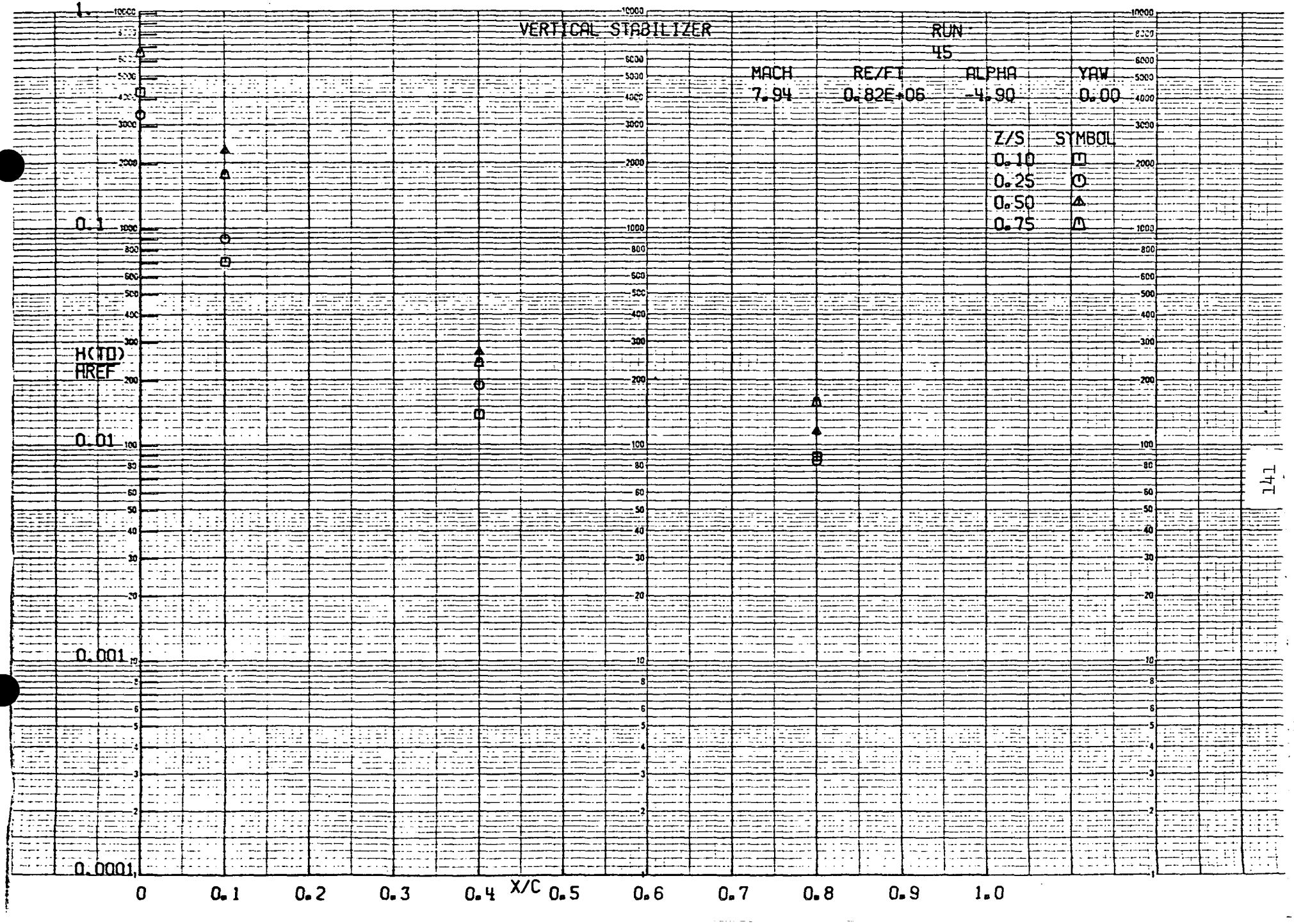

LOWER WING SURFACE
RUN
33
MACH
8.00
RE/FT
3.73E+06
ALPHA
39.97
YAW
0.00
δ_e = 0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

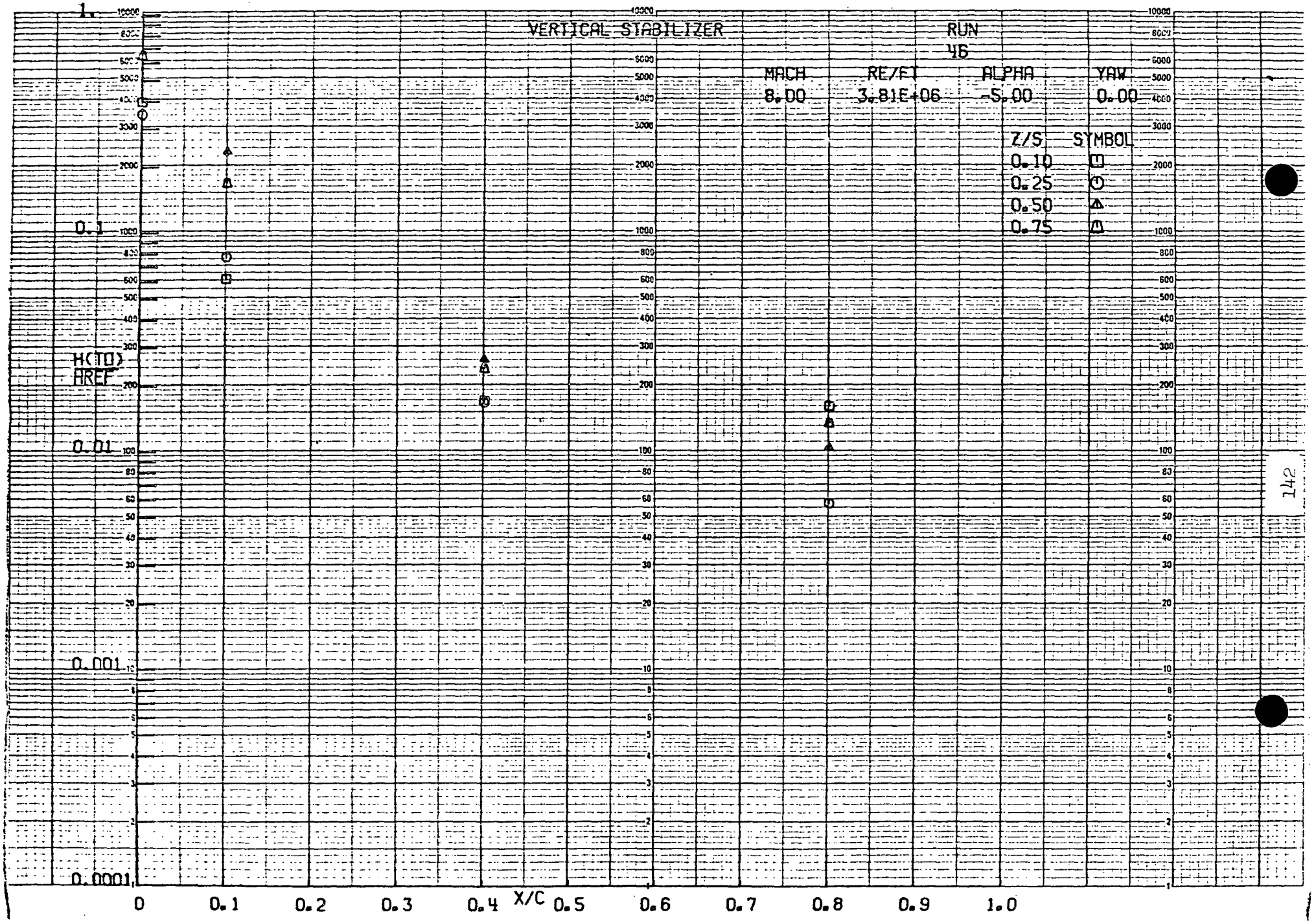

LOWER WING SURFACE
RUN
30
MACH
8.00
RE/FT
3.76E+06
ALPHA
39.98
YAW
0.00
GRIT-ON
δ_e = 0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
AREF
1
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

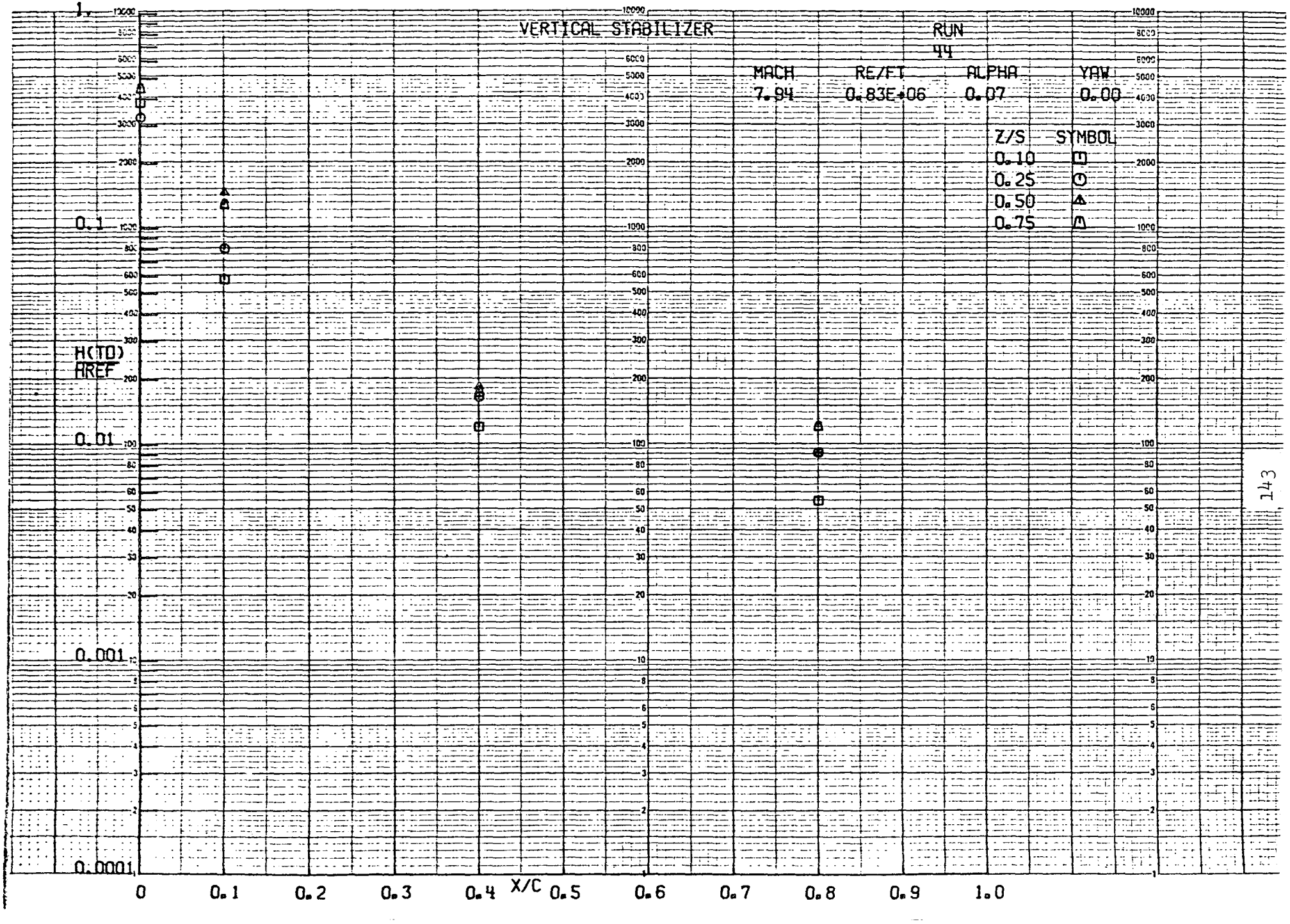

LOWER WING SURFACE
RUN
35
MACH
8.00
RE/FT
2.52E+06
ALPHA
49.99
YAW
0.00
δe = 0°
Y/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

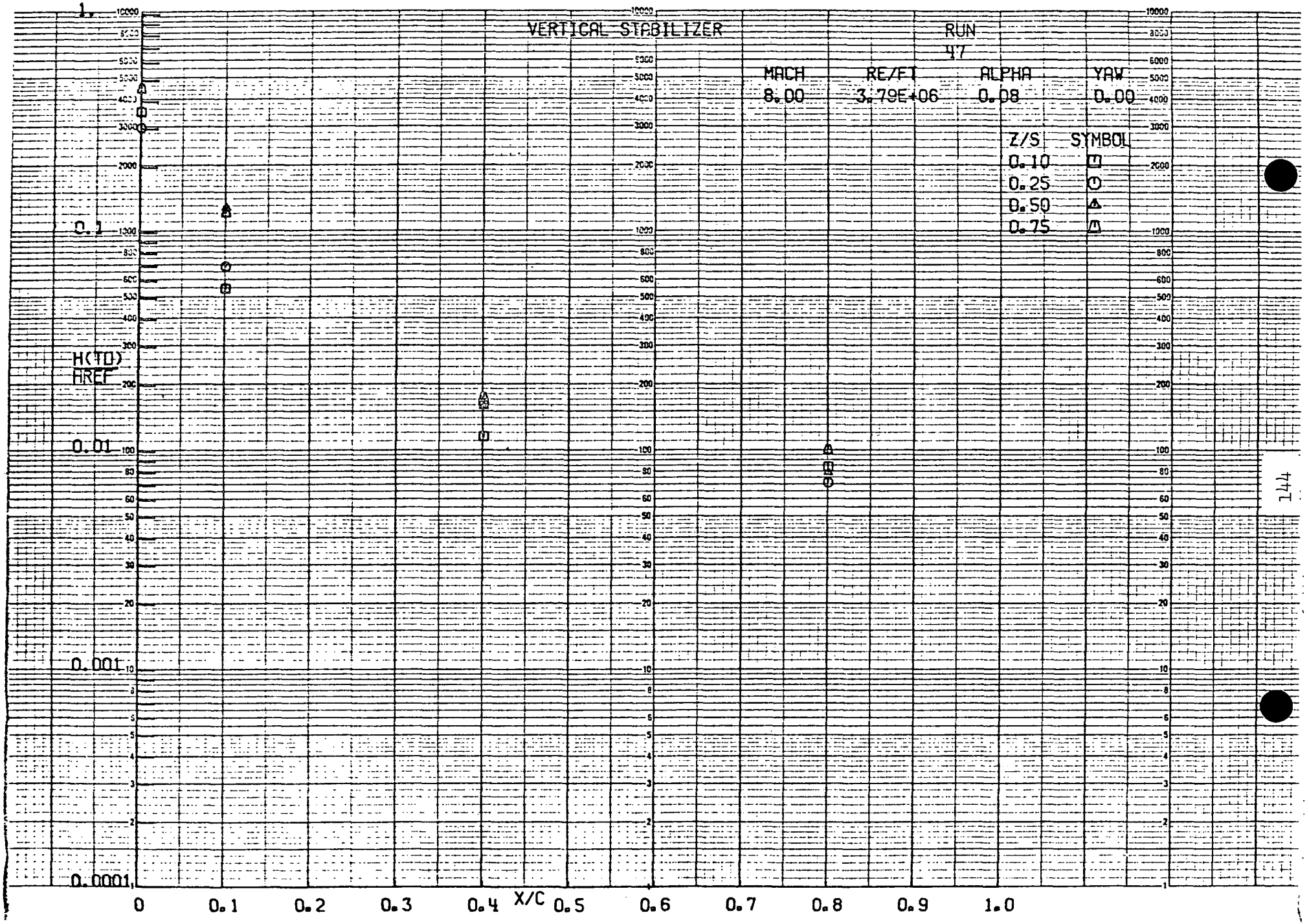

LOWER WING SURFACE
RUN
34
MACH
8.00
RE/FT
3.72E+06
ALPHA
49.99
YAW
0.00
$\delta_e = 0°$
Y/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TD)
AREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

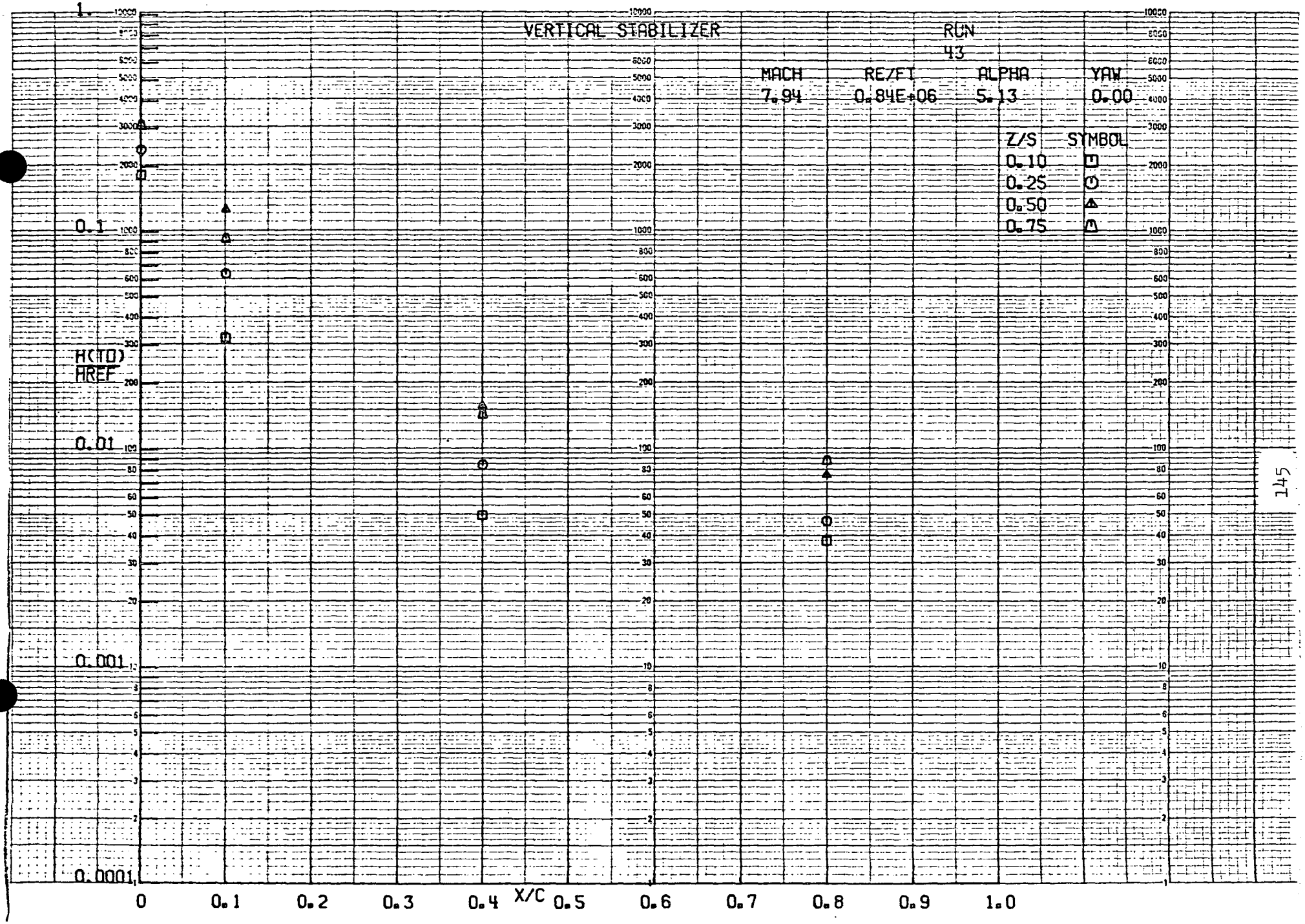

LOWER WING SURFACE
RUN
29
MACH
8.00
RE/FT
3.76E+06
ALPHA
49.96
YAW
0.00
δe = 0°
GRIT-ON
Y/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TD)
HREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

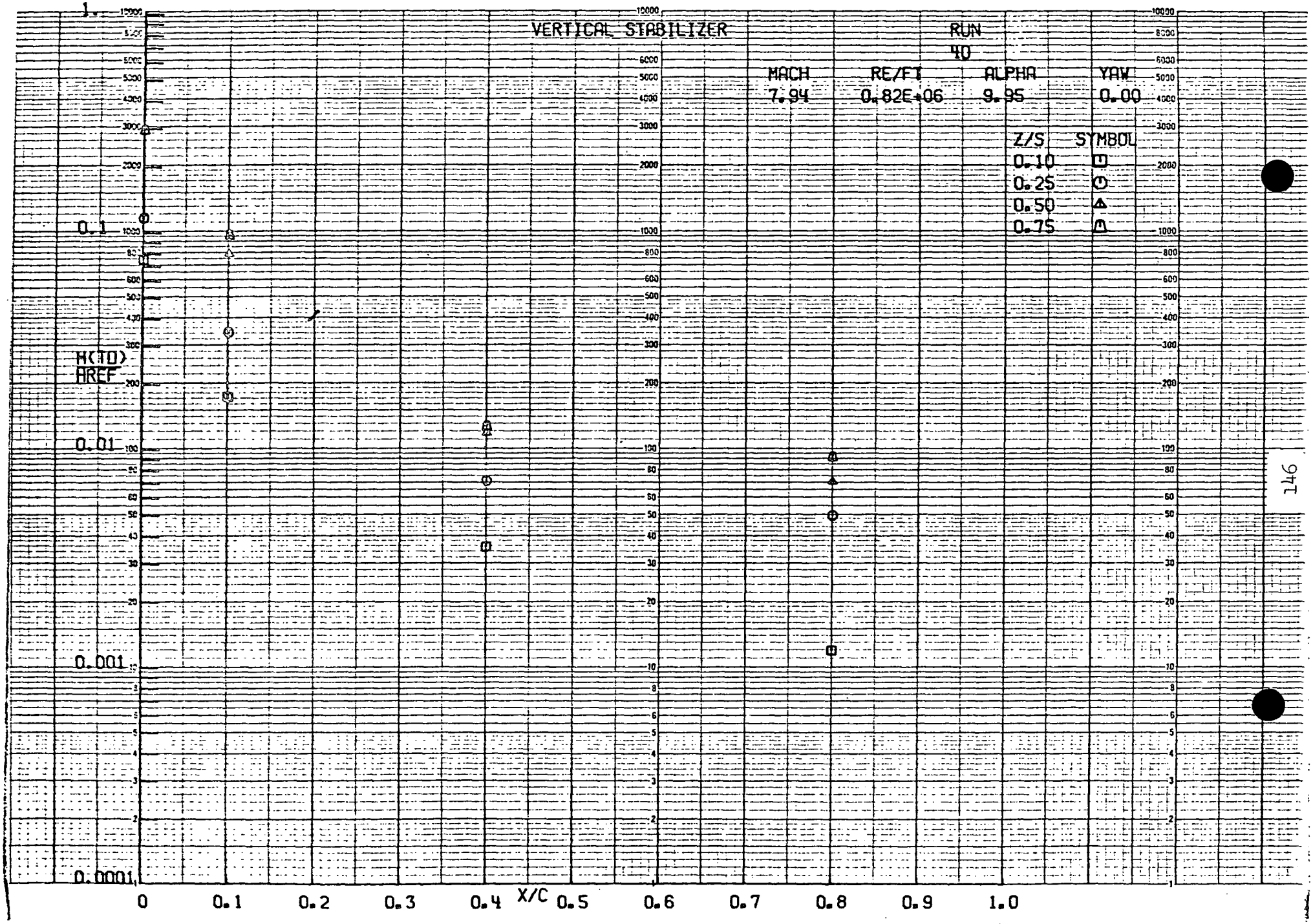

1.
VERTICAL STABILIZER
RUN
45
MACH
7.94
RE/FT
0.82E+06
ALPHA
-4.90
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

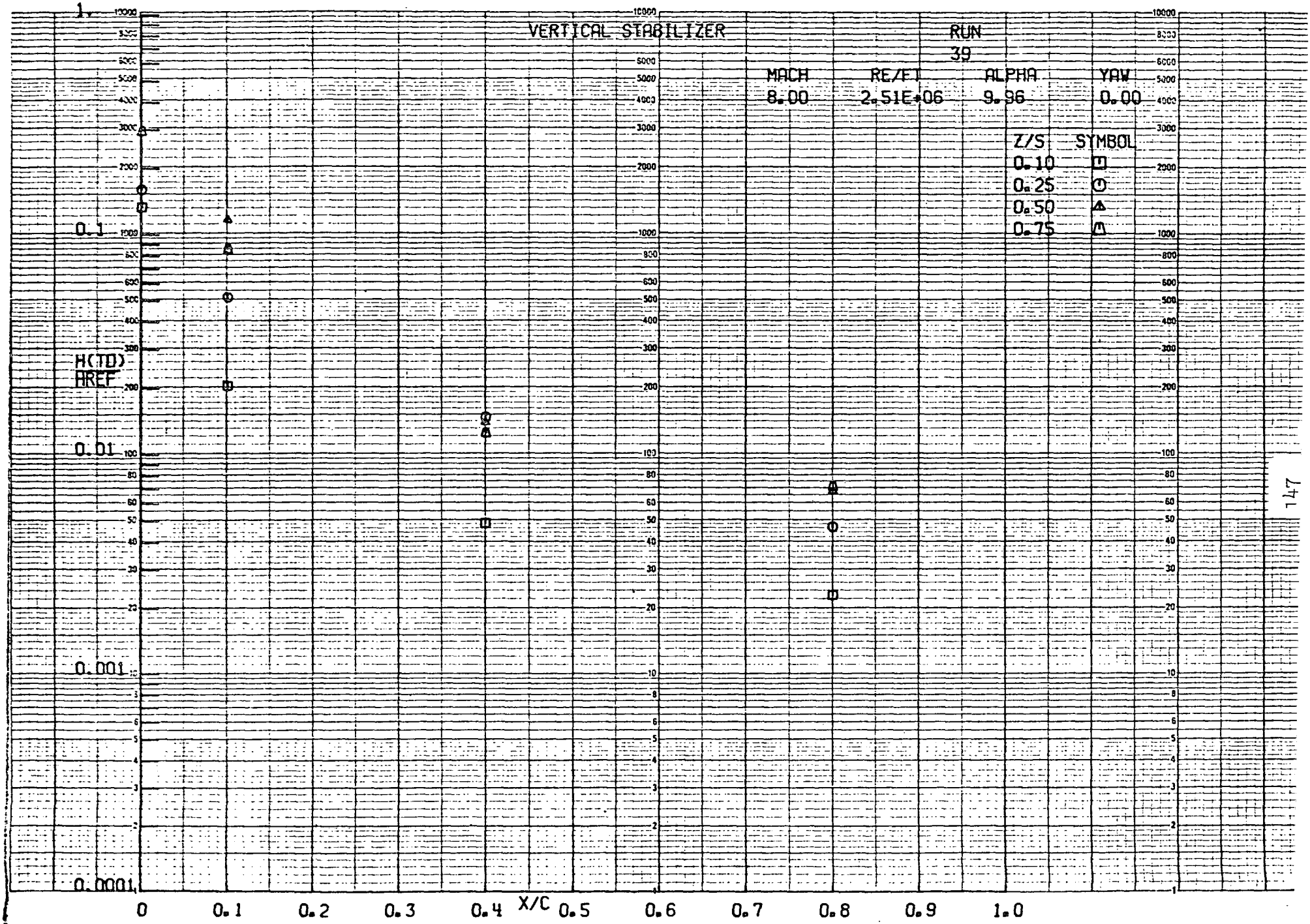

1.
VERTICAL STABILIZER
RUN
46
MACH
8.00
RE/FT
3.81E+06
ALPHA
-5.00
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

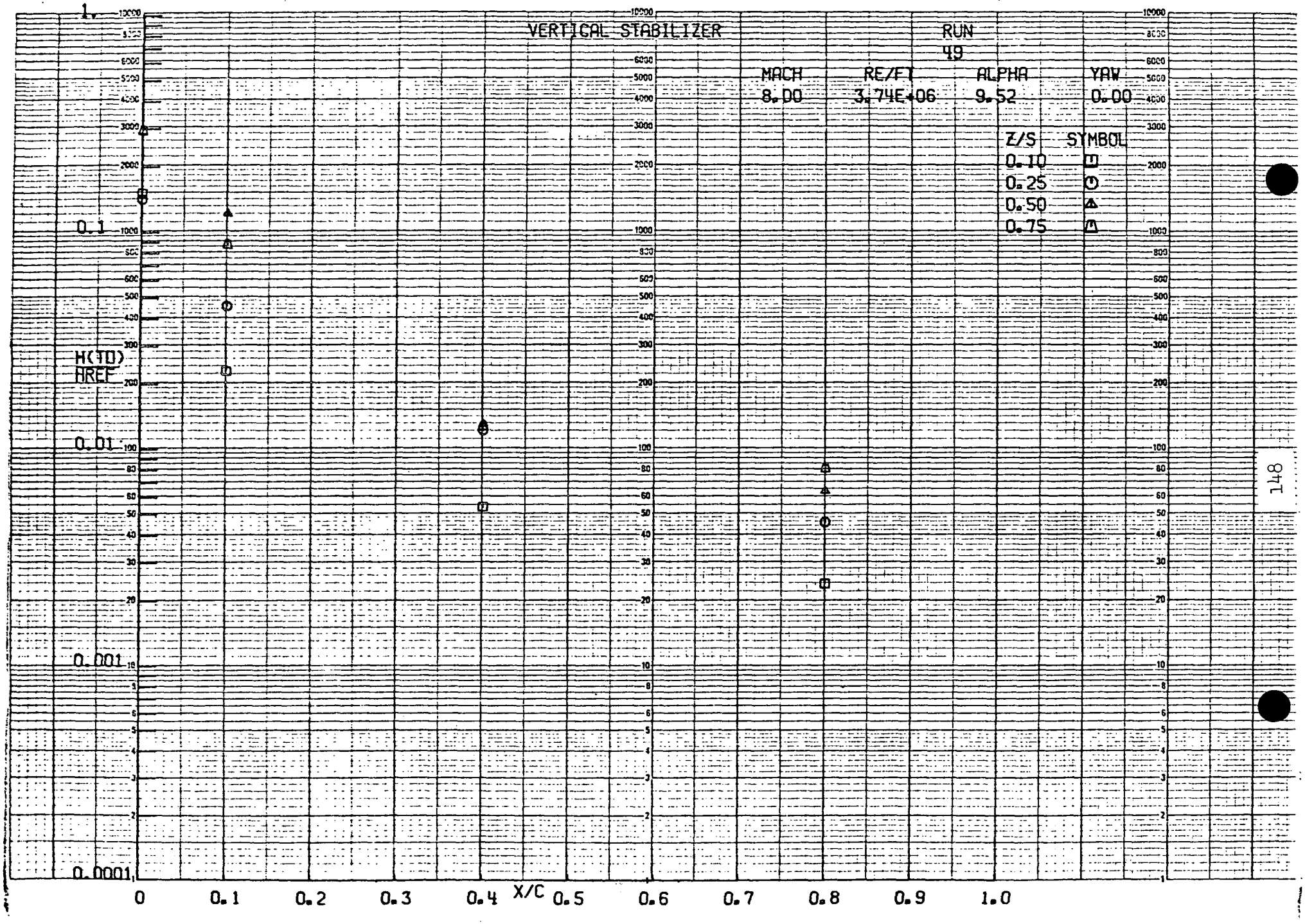

VERTICAL STABILIZER
RUN
44
MACH
7.94
RE/FT
0.83E+06
ALPHA
0.07
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
AREF
0.1
0.01
0.001
0.0001
X/C
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0

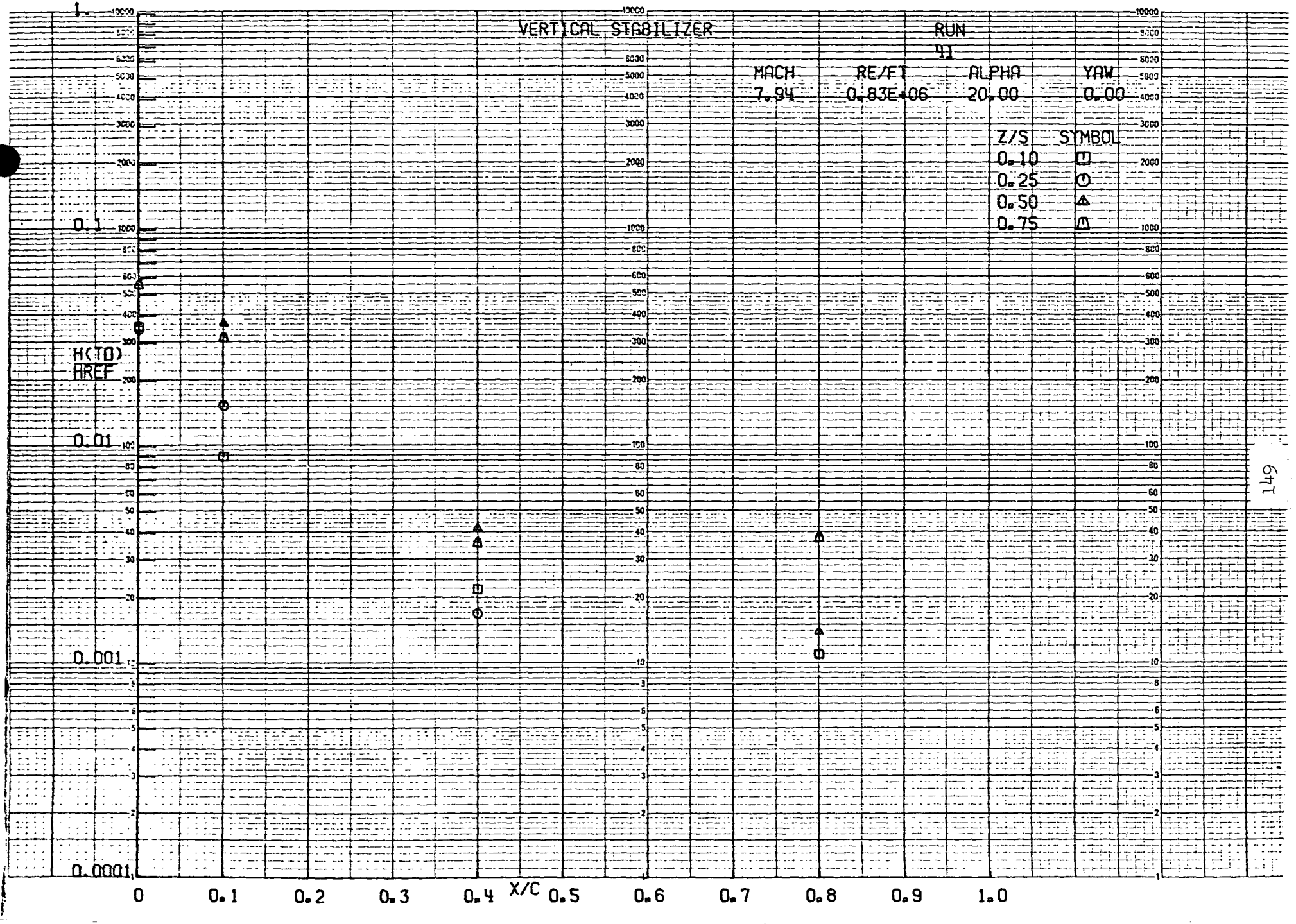

VERTICAL STABILIZER
RUN
47
MACH
8.00
RE/FT
3.79E+06
ALPHA
0.08
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TD)
HREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

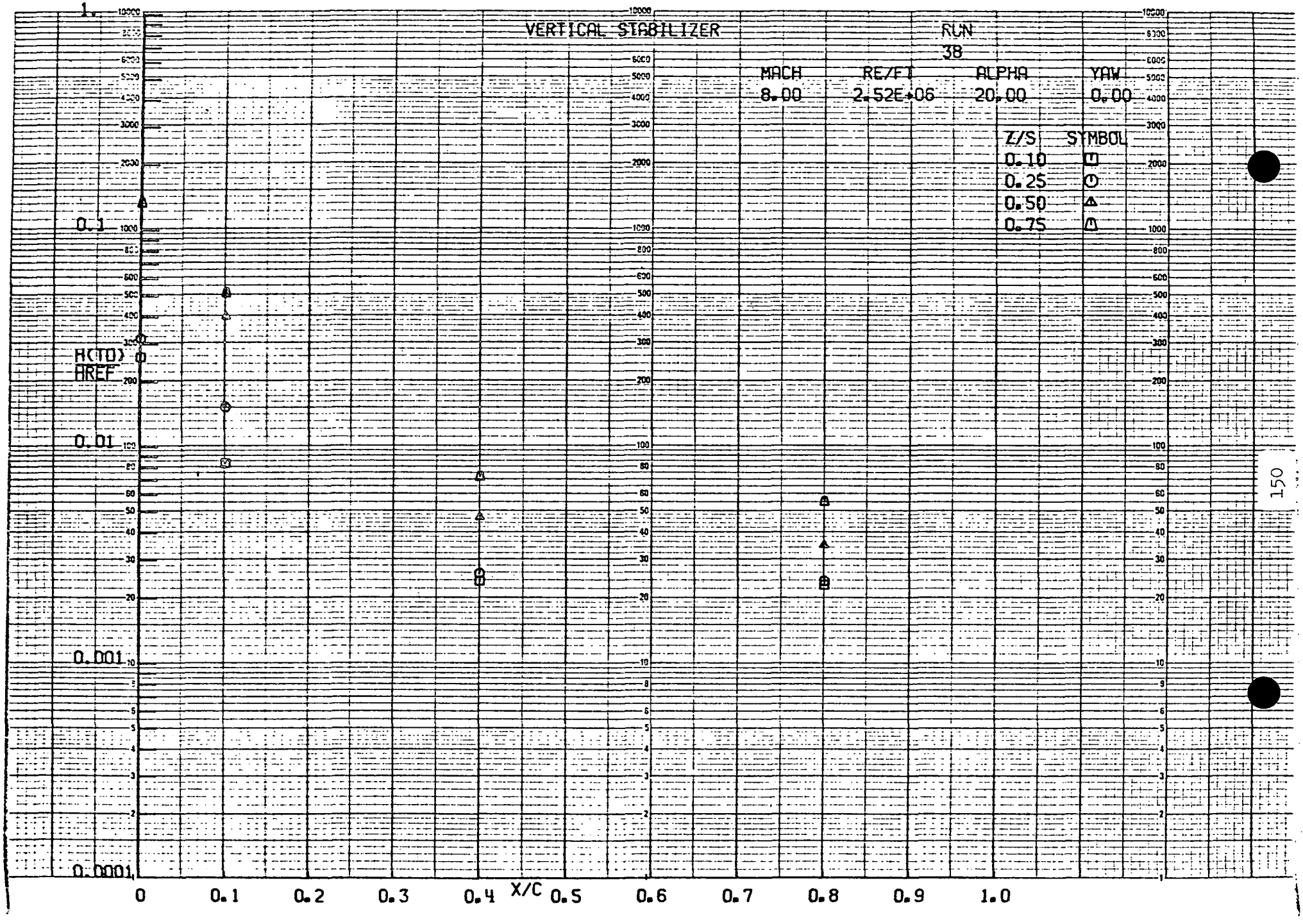

VERTICAL STABILIZER
RUN
43
MACH
7.94
RE/FT
0.84E+06
ALPHA
5.13
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TO)
HREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

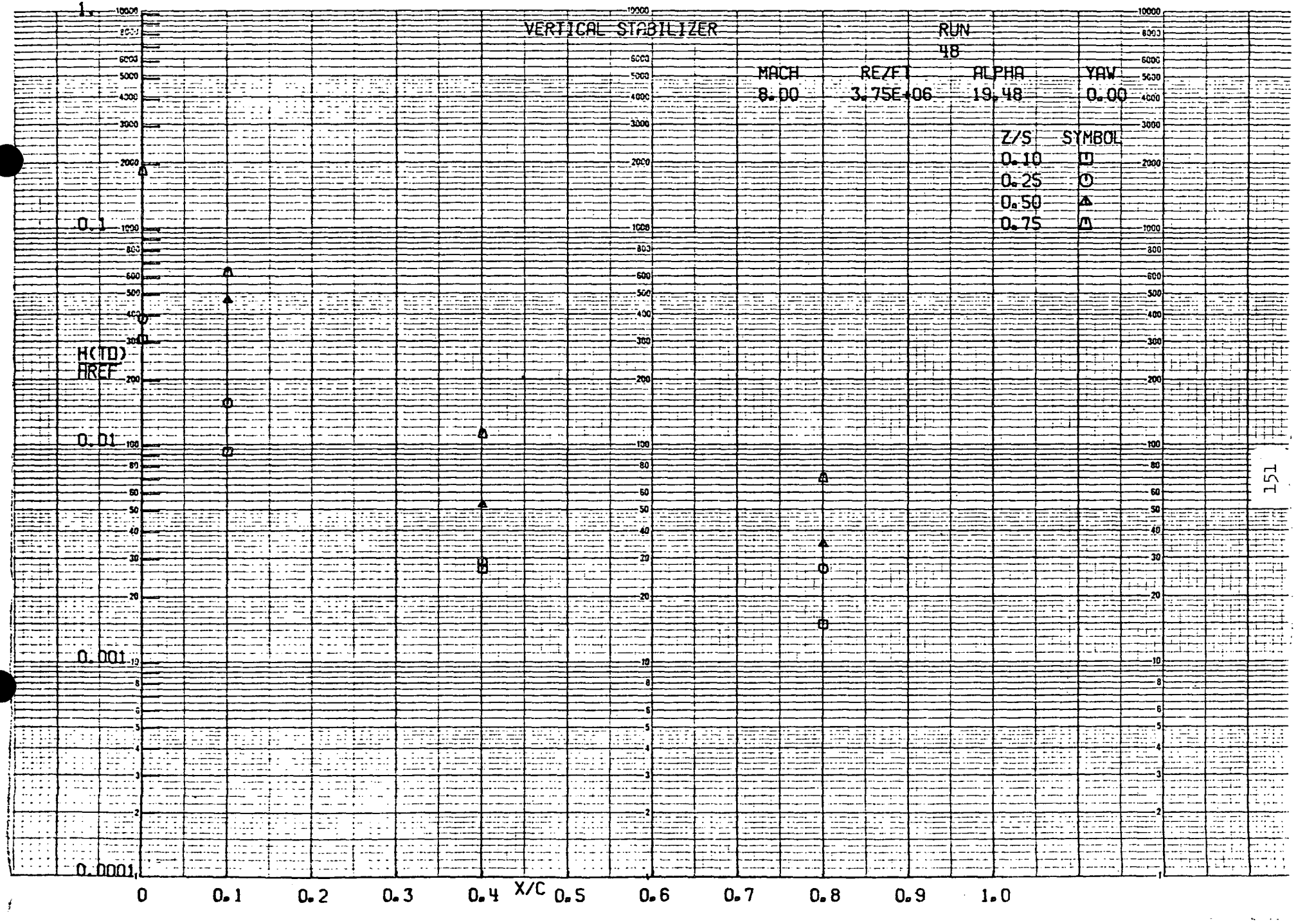

VERTICAL STABILIZER
RUN
40
MACH
7.94
RE/FT
0.82E+06
ALPHA
9.95
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
H(TO)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

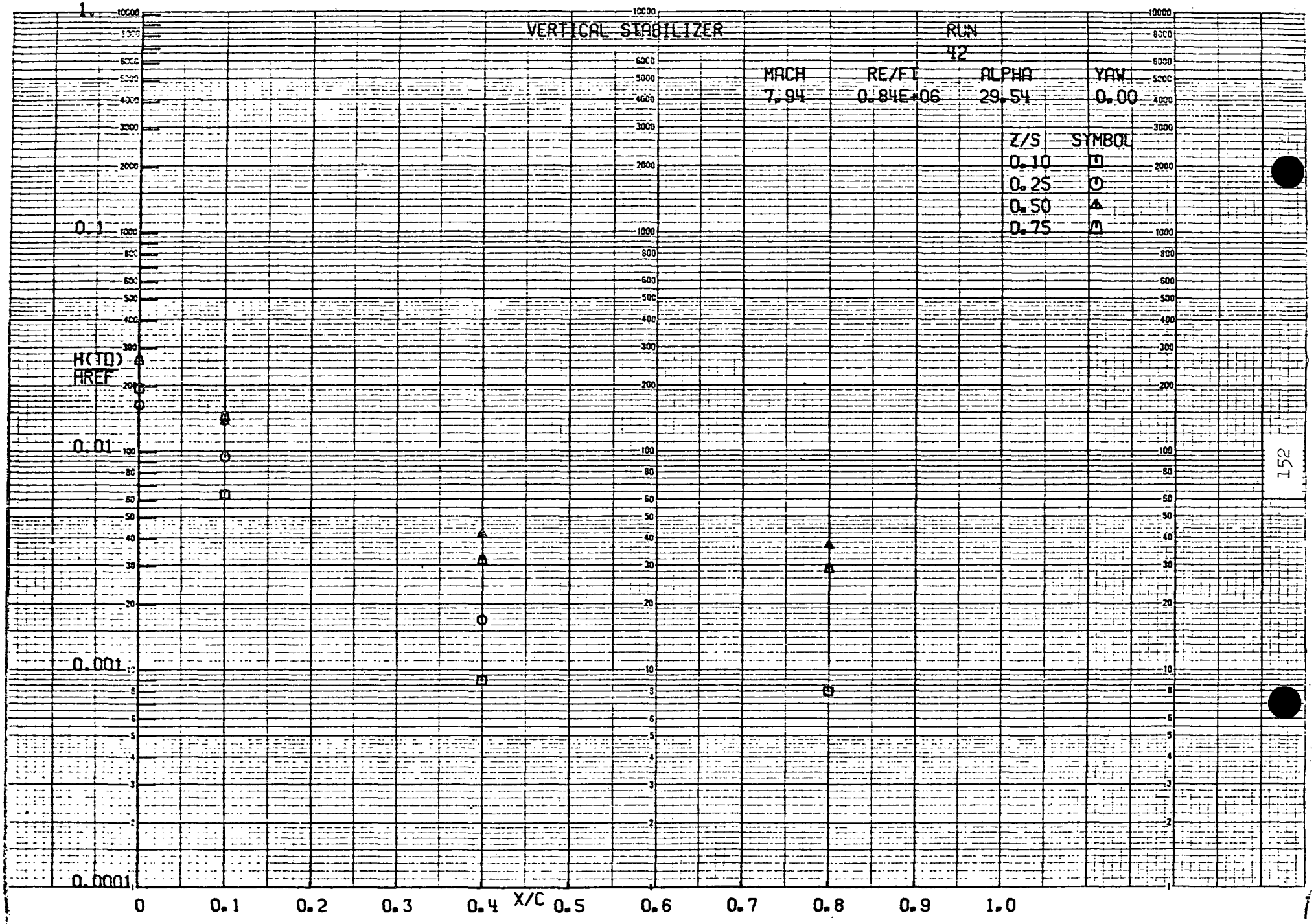

VERTICAL STABILIZER
RUN
39
MACH
8.00
RE/FT
2.51E+06
ALPHA
9.96
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
AREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

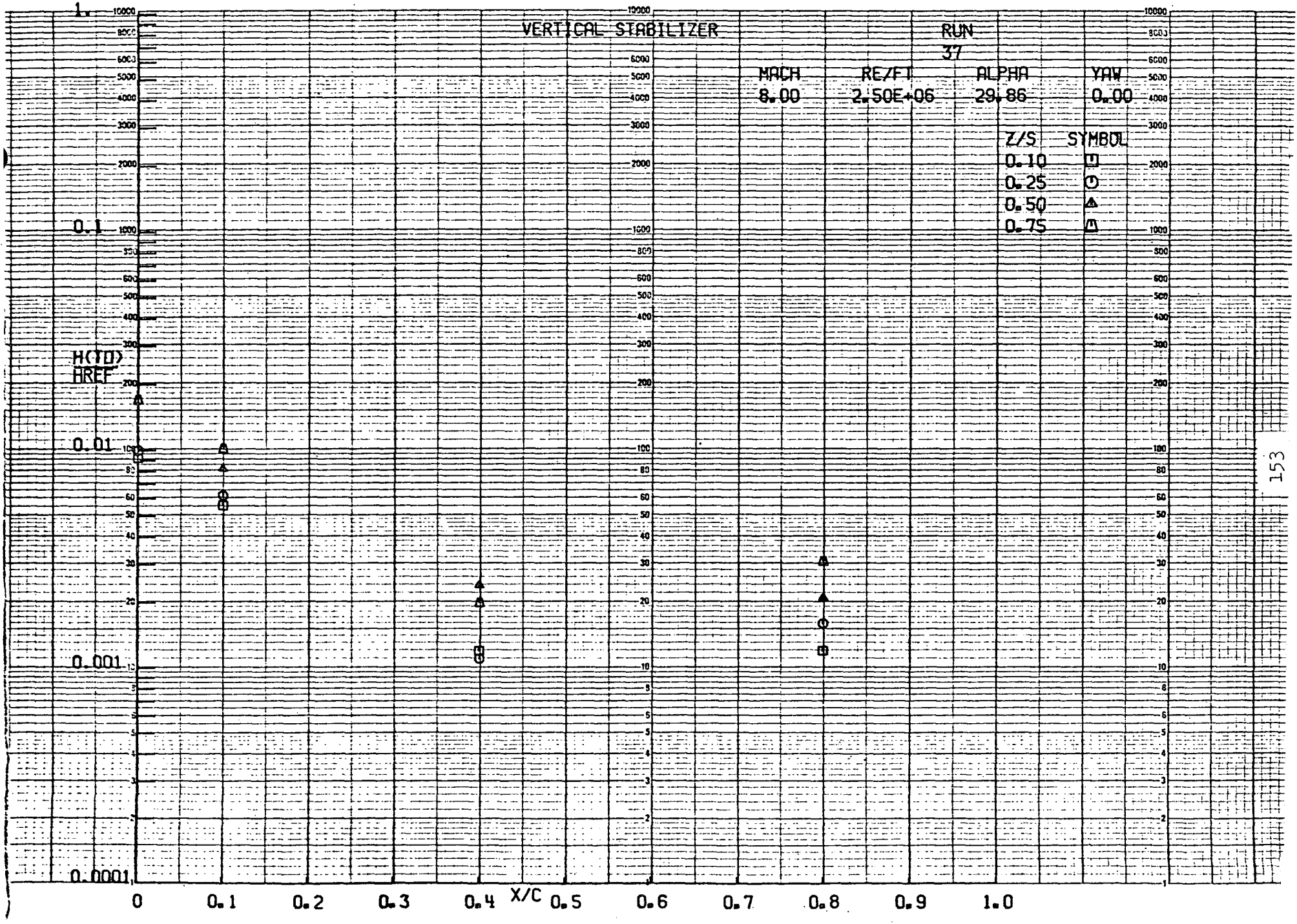

VERTICAL STABILIZER
RUN
49
MACH
8.00
RE/FT
3.74E+06
ALPHA
9.52
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
AREF
0.1
0.01
0.001
0.0001
X/C
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0

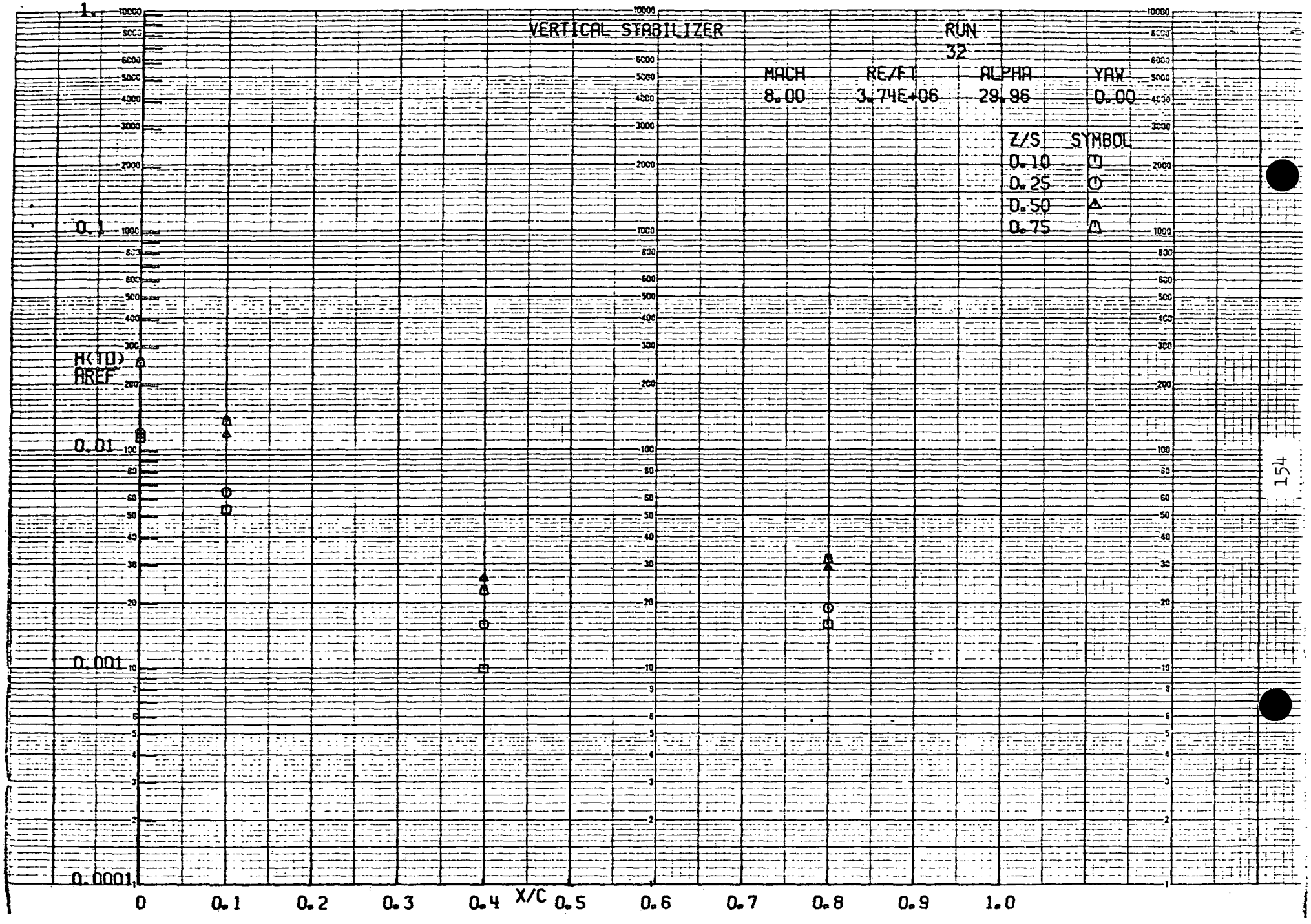

VERTICAL STABILIZER
RUN
41
MACH
7.94
RE/FT
0.83E+06
ALPHA
20.00
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TO)
AREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

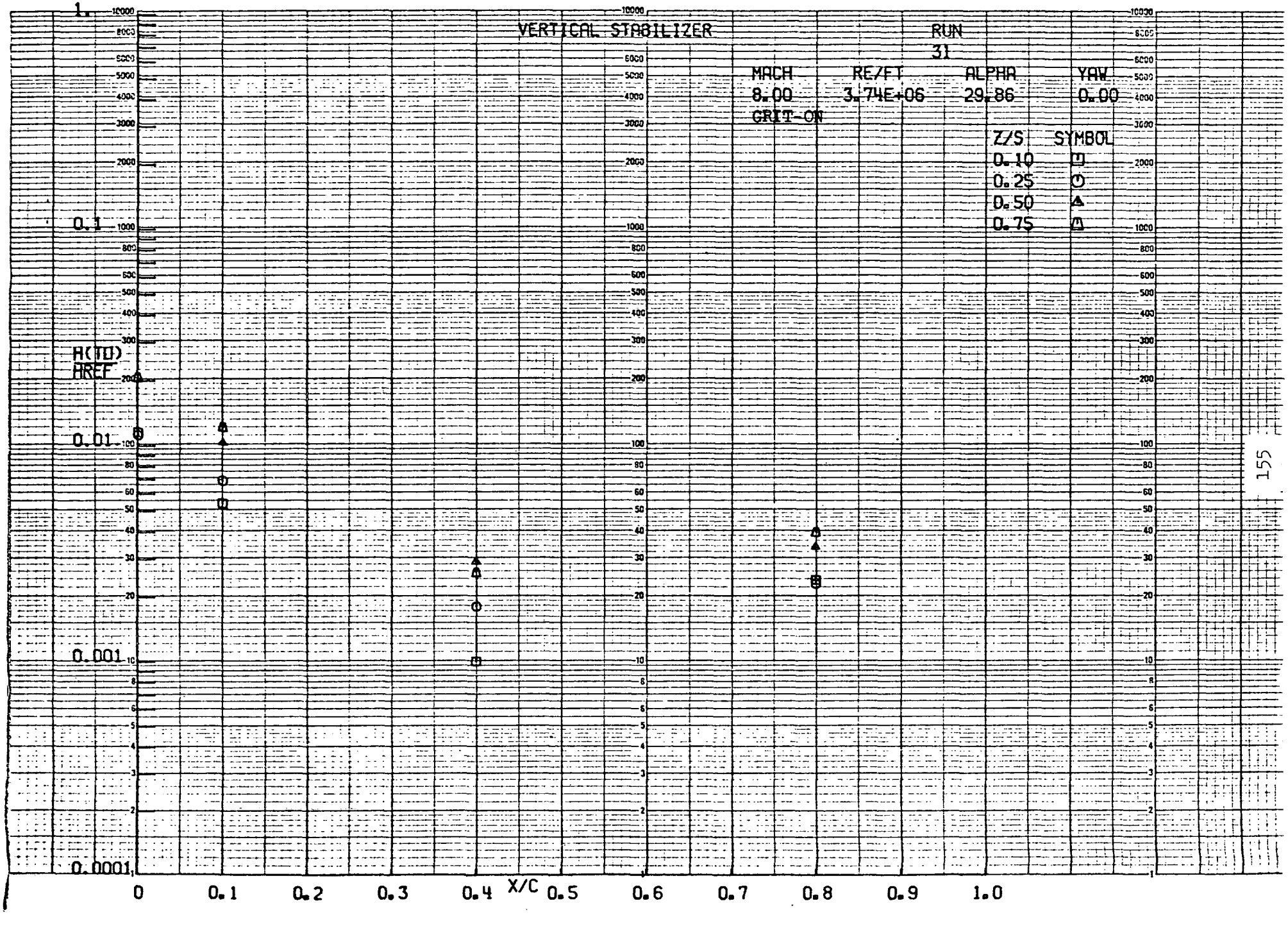

VERTICAL STABILIZER
RUN
38
MACH
8.00
RE/FT
2.52E+06
ALPHA
20.00
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TD)
HREF
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
X/C

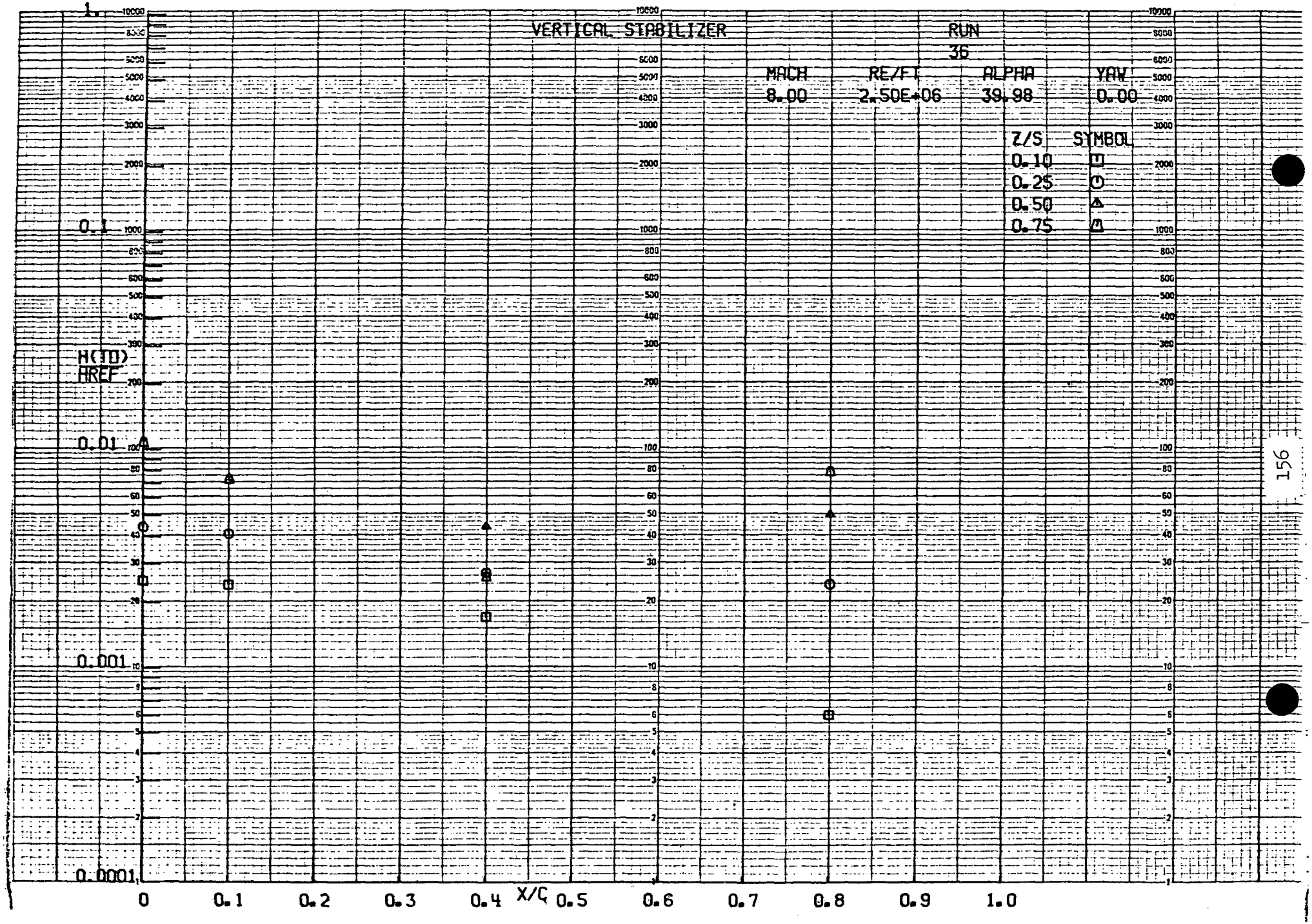

VERTICAL STABILIZER
RUN
48
MACH
8.00
RE/FT
3.75E+06
ALPHA
19.48
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TD)
AREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

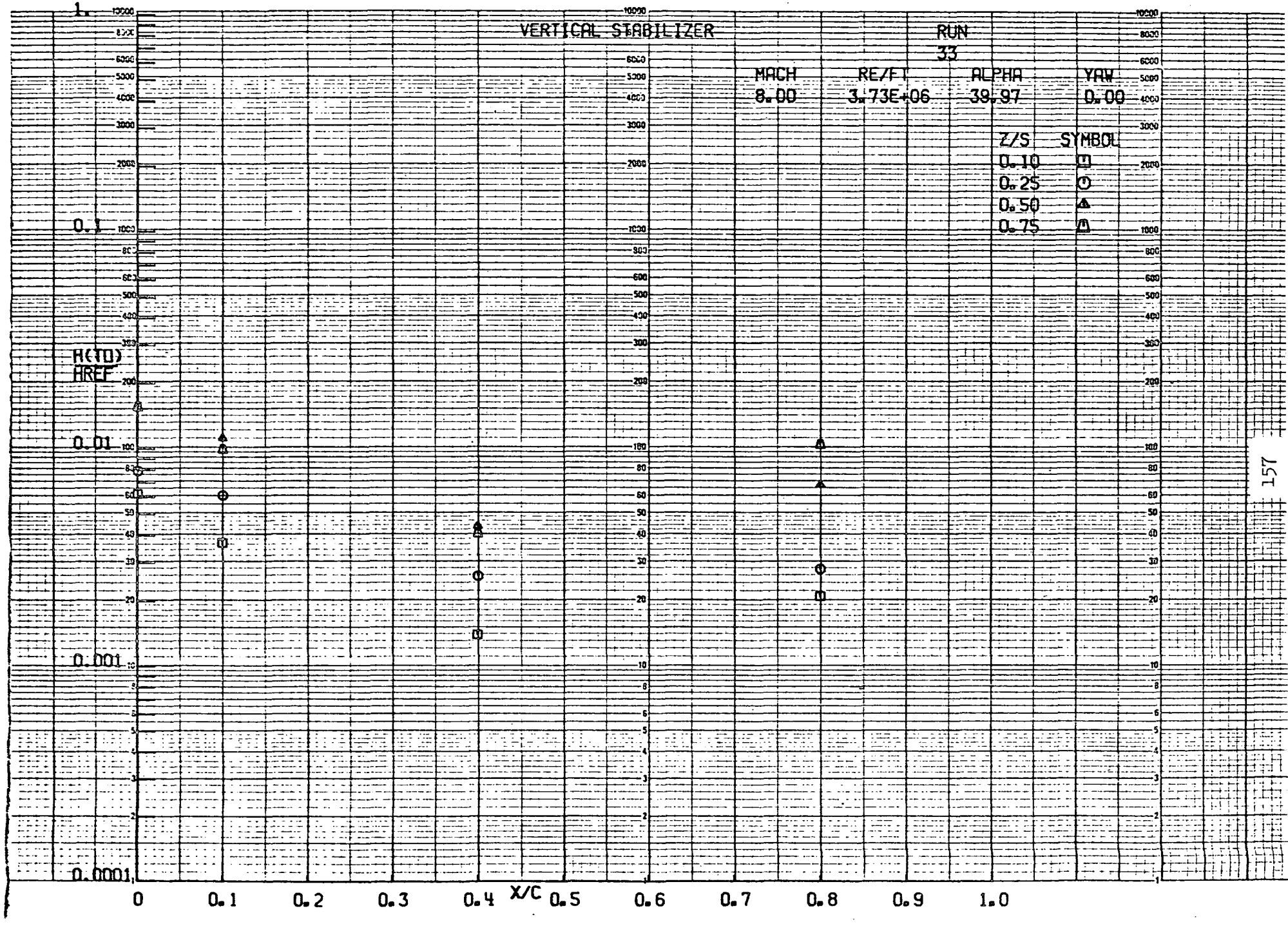

VERTICAL STABILIZER
RUN
42
MACH
7.94
RE/FT
0.84E+06
ALPHA
29.54
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
HREF
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0
152

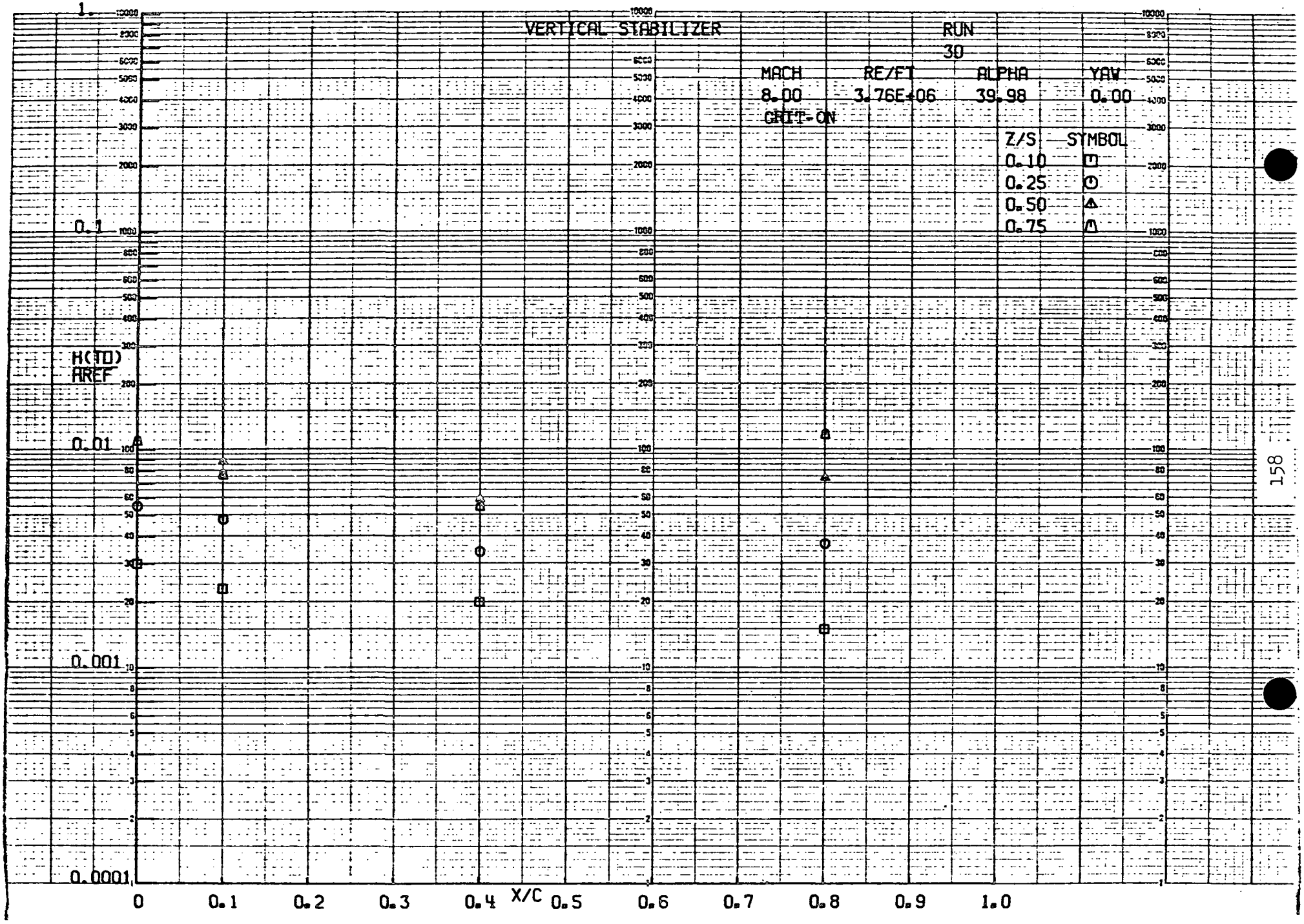

VERTICAL STABILIZER
RUN
37
MACH
8.00
RE/FT
2.50E+06
ALPHA
29.86
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
HREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

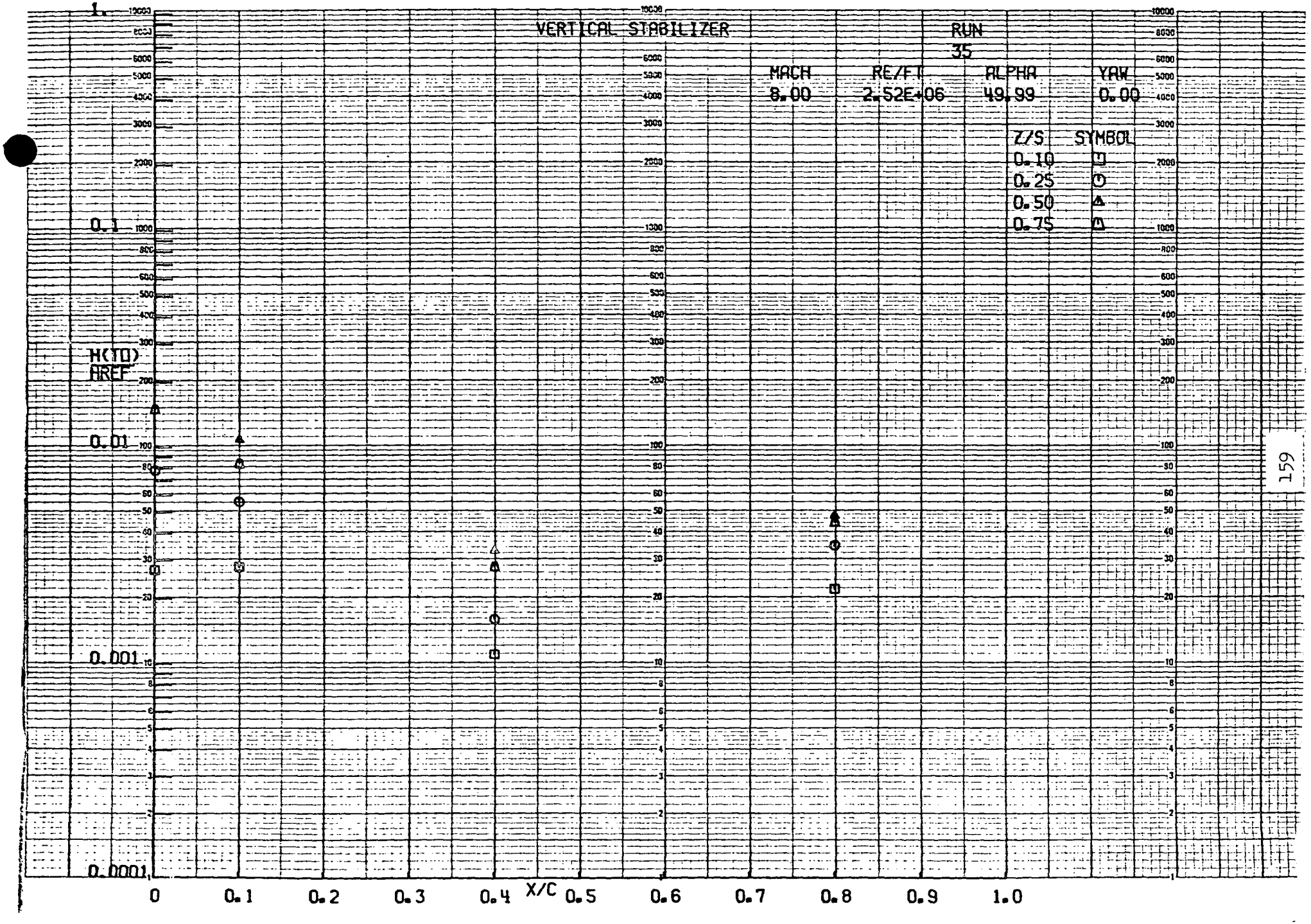

VERTICAL STABILIZER
RUN
32
MACH
8.00
RE/FT
3.74E+06
ALPHA
29.96
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TO)
AREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0

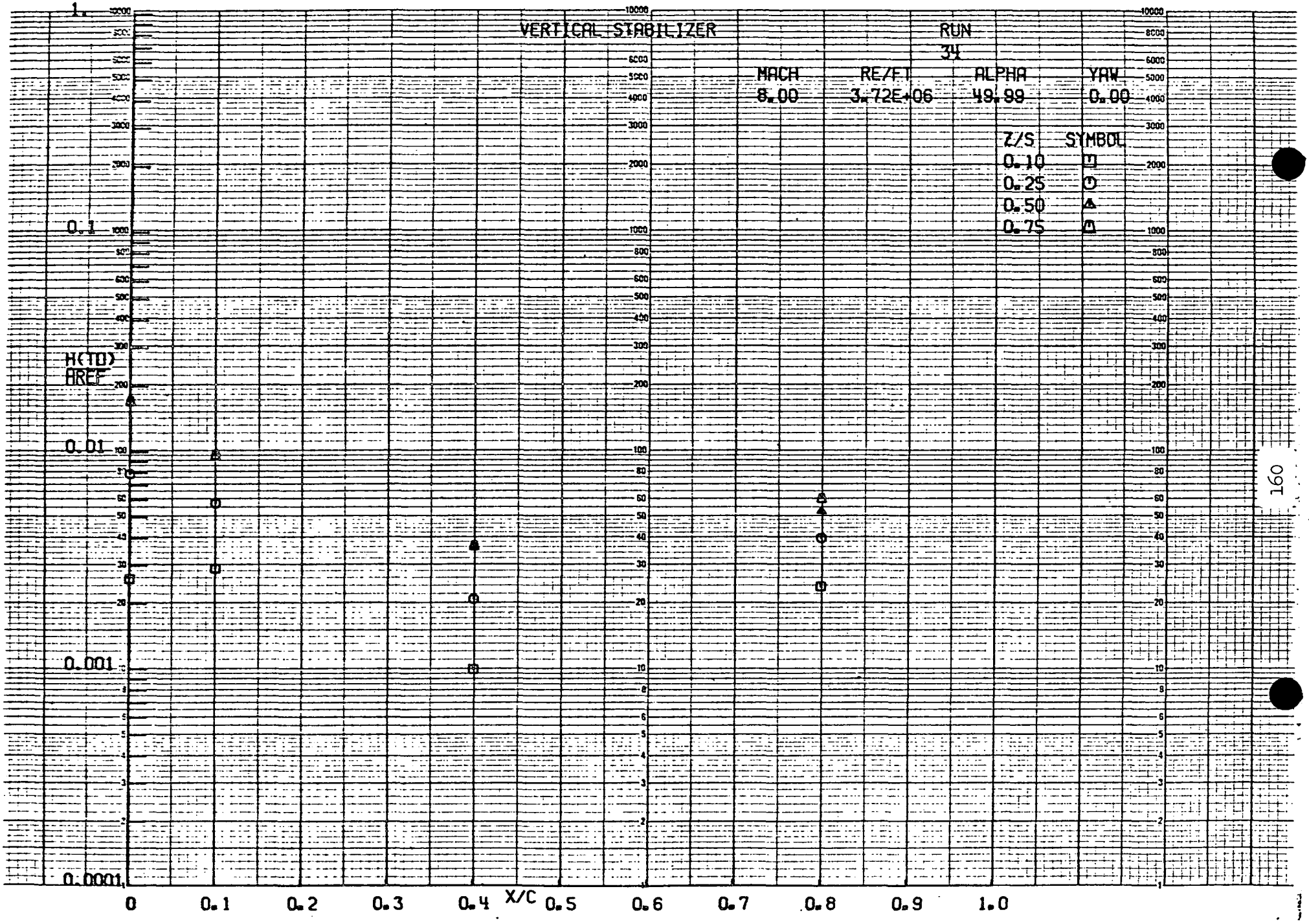

VERTICAL STABILIZER
RUN
31
MACH
8.00
RE/FT
3.74E+06
ALPHA
29.86
YAW
0.00
GRIT-ON
Z/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
A(TD)
AREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0


VERTICAL STABILIZER
RUN
36
MACH
8.00
RE/FT
2.50E+06
ALPHA
39.98
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TD)
HREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0


VERTICAL STABILIZER
RUN
33
MACH
8.00
RE/FT
3.73E+06
ALPHA
39.97
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TO)
HREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0


VERTICAL STABILIZER
RUN
30
MACH
8.00
RE/FT
3.76E+06
ALPHA
39.98
YAW
0.00
GRIT-ON
Z/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TO)
AREF
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0


VERTICAL STABILIZER
RUN
35
MACH
8.00
RE/FT
2.52E+06
ALPHA
49.99
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
0
0.1
0.2
0.3
0.4
X/C
0.5
0.6
0.7
0.8
0.9
1.0


VERTICAL STABILIZER
RUN
34
MACH
8.00
RE/FT
3.72E+06
ALPHA
49.99
YAW
0.00
Z/S
SYMBOL
0.10
0.25
0.50
0.75
H(TD)
AREF
1.
0.1
0.01
0.001
0.0001
X/C
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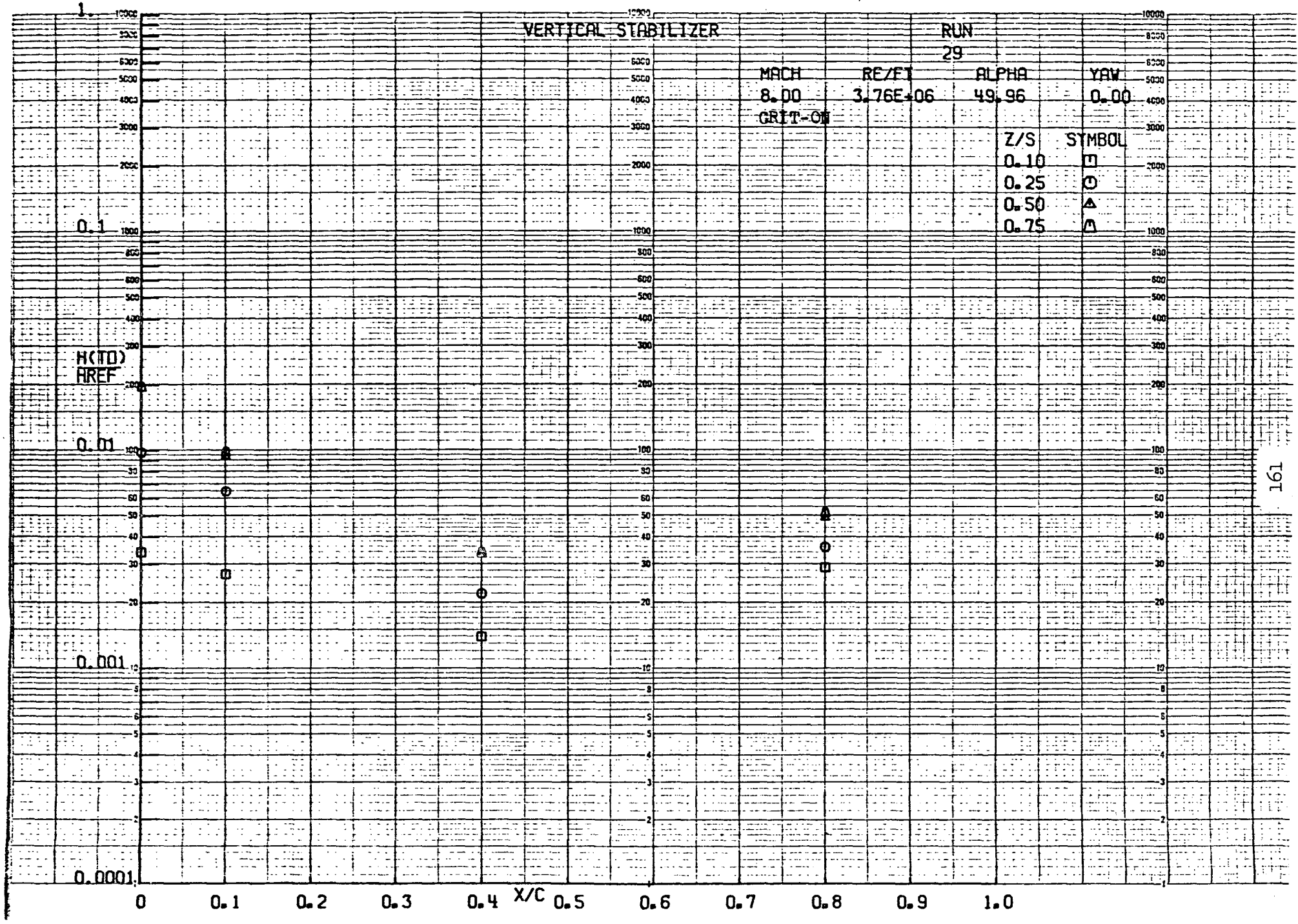
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
160


VERTICAL STABILIZER
RUN
29
MACH
8.00
RE/FT
3.76E+06
ALPHA
49.96
YAW
0.00
GRIT-ON
Z/S
SYMBOL
0.10
0.25
0.50
0.75
1.
0.1
0.01
0.001
0.0001
H(TO)
HREF
X/C
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0

A P P E N D I X

5/29/71

AEDC(AHO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL A
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
29	7	KAH-U=0	8.00	855.8	1336	50.06	-8.06	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .009FT)	SIFH (R= .009FT)	SWITCH POSITION
96.8	.088	3.927	3898	7.899E-05	7.797E-08	3.768 06	6.819E-02	2.925E-02	1

TC NO	TB	DTWCT	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF	FUSELAGE X/L	FUSELAGE Y/YMAX
1	595	142.284	29.943	4.040E-02	.5925	4.928E-02	.7227	5.536E-02	.8119	0	0
2	592	137.852	26.584	3.620E-02	.5308	4.474E-02	.6489	4.978E-02	.7301	.0100	-0
3	594	130.189	21.013	2.794E-02	.4097	3.397E-02	.4982	3.808E-02	.5585	.0100	-.441
4	591	73.031	3.530	4.494E-03	.0659	5.419E-03	.0794	6.034E-03	.0885	.0100	-1.000
5	544	5.262	.832	1.050E-03	.0154	1.262E-03	.0185	1.404E-03	.0206	.0100	0
6	595	141.785	26.591	3.318E-02	.4865	4.067E-02	.5965	4.947E-02	.6669	.0200	-0
7	597	141.048	26.439	3.576E-02	.5244	4.364E-02	.6400	4.905E-02	.7194	.0300	-0
8	594	120.832	21.518	2.859E-02	.4191	3.474E-02	.5096	3.895E-02	.5712	.0300	-.103
9	549	19.888	3.153	4.003E-03	.0587	4.820E-03	.0707	5.369E-03	.0787	.0300	-1.000
10	543	5.218	.939	1.183E-03	.0174	1.421E-03	.0209	1.583E-03	.0232	.0300	0
11	588	129.985	26.098	3.488E-02	.5112	4.243E-02	.6224	4.761E-02	.6982	.0400	-0
12	577	90.952	18.168	2.394E-02	.3511	2.908E-02	.4261	3.253E-02	.4771	.0500	-0
13	573	81.340	16.615	2.178E-02	.3193	2.640E-02	.3872	2.953E-02	.4332	.0500	-.310
14	551	21.102	3.697	4.707E-03	.0690	5.672E-03	.0832	6.320E-03	.0927	.0500	-1.000
15	545	5.858	1.219	1.515E-03	.0225	1.846E-03	.0271	2.055E-03	.0301	.0500	0
16	587	132.713	17.017	2.272E-02	.3331	2.764E-02	.4054	3.101E-02	.4548	.0800	-0
17	571	69.766	11.963	1.563E-02	.2293	1.894E-02	.2778	2.118E-02	.3106	.0800	-.360
18	553	16.127	2.739	3.495E-03	.0513	4.213E-03	.0618	4.696E-03	.0689	.0800	-1.000
19	575	89.834	16.923	2.221E-02	.3257	2.691E-02	.3948	3.014E-02	.4421	.1000	-0
20	595	99.446	7.752	1.031E-02	.1512	1.254E-02	.1839	1.406E-02	.2062	.1000	-.383
21	580	71.682	11.917	1.576E-02	.2311	1.914E-02	.2808	2.144E-02	.3145	.1000	-.817
22	551	8.919	1.611	2.052E-03	.0301	2.472E-03	.0363	2.754E-03	.0404	.1000	-1.000
23	548	.463	.083	1.060E-04	.0016	1.275E-04	.0019	1.421E-04	.0021	.1000	.783
24	551	6.001	1.150	1.463E-03	.0215	1.763E-03	.0259	1.964E-03	.0288	.1000	0
25	545	47.368	9.667	1.254E-02	.1839	1.516E-02	.2224	1.694E-02	.2485	.1500	-.893
26	549	8.885	1.749	2.270E-03	.0326	2.673E-03	.0392	2.977E-03	.0437	.1500	-1.000
27	547	.720	.138	1.743E-04	.0026	2.097E-04	.0031	2.335E-04	.0034	.1500	.664
28	549	3.574	.567	7.194E-04	.0105	8.663E-04	.0127	9.649E-04	.0142	.1500	0
29	580	101.558	18.623	2.444E-02	.3613	2.992E-02	.4349	3.352E-02	.4917	.2000	-0
30	578	100.726	20.126	2.654E-02	.3892	3.221E-02	.4724	3.607E-02	.5290	.2000	-.278
31	575	87.761	18.485	2.429E-02	.3562	2.944E-02	.4321	3.297E-02	.4836	.2000	-.466
32	566	50.778	10.086	1.309E-02	.1920	1.581E-02	.2323	1.769BE-02	.2595	.2000	-.792
33	553	12.835	2.321	2.964E-03	.0435	3.574E-03	.0524	3.984E-03	.0584	.2000	-1.000
34	547	.645	.123	1.560E-04	.0023	1.878E-04	.0028	2.091E-04	.0031	.2000	.888
35	547	2.407	.474	5.500E-04	.0081	6.621E-04	.0097	7.373IE-04	.0108	.2000	0
36	549	3.444	.568	7.173E-04	.0105	8.639E-04	.0127	9.622E-04	.0141	.2100	0
37	549	4.579	.826	1.050E-03	.0154	1.266E-03	.0185	1.408AE-03	.0207	.2200	0
38	549	3.687	.589	7.426E-04	.0109	8.944E-04	.0131	9.962E-04	.0146	.2300	0
39	548	2.042	.402	5.096E-04	.0075	6.135E-04	.0090	6.832BE-04	.0100	.2400	.486
40	548	1.455	.231	2.926E-04	.0043	3.524OE-04	.0052	3.926AE-04	.0058	.2500	0
41	550	.500	.101	1.287E-04	.0019	1.550BE-04	.0023	1.727E-04	.0025	.2700	.465
42	549	.839	.170	2.158E-04	.0032	2.599ZE-04	.0038	2.895JE-04	.0042	.2700	.465
43	550	.859	.131	1.662E-04	.0024	2.002BE-04	.0029	2.231JE-04	.0033	.2700	0
44	615	84.584	15.296	2.120E-02	.3109	2.602OF-02	.3816	2.936OE-02	.4305	.3000	-0
45	623	84.977	16.371	2.294E-02	.3365	2.821IE-02	.4140	3.190BE-02	.4679	.3000	-.312
46	610	74.634	15.977	2.199E-02	.3225	2.694SE-02	.3951	3.036JE-02	.4453	.3000	-.504
47	586	19.334	5.917	7.883E-03	.1156	9.598GE-03	.1406	1.075GE-02	.1577	.3000	-.857
48	565	15.589	2.669	3.454E-03	.0506	4.177OE-03	.0613	4.665BE-03	.0684	.3000	-1.000
49	552	2.689	.530	6.762E-04	.0099	8.150IE-04	.0120	9.083JE-04	.0133	.3000	.983
50	551	.887	.175	2.226E-04	.0033	2.682AE-04	.0039	2.989OE-04	.0044	.3000	.853
51	550	.324	.047	8.573E-05	.0013	1.032BE-04	.0015	1.150SE-04	.0017	.3000	.433
52	550	.366	.078	9.671E-05	.0014	1.165ZE-04	.0017	1.298ZE-04	.0019	.3000	.361
53	550	.801	.136	1.733E-04	.0025	2.087JE-04	.0031	2.325GE-04	.0034	.3000	0
54	610	68.067	13.801	1.900E-02	.2786	2.287JE-02	.3413	2.623JE-02	.3847	.4000	-0
55	614	74.400	15.119	2.094E-02	.3070	2.568GE-02	.3767	2.897GE-02	.4250	.4000	-.321
56	613	74.417	15.117	2.091E-02	.3066	2.564JE-02	.3761	2.892GE-02	.4242	.4000	-.526
57	588	40.359	7.206	9.629E-03	.1412	1.172IE-02	.1719	1.315OE-02	.1928	.4000	-.951
58	566	18.064	3.249	4.272E-03	.0626	5.169ZE-03	.0758	5.775JE-03	.0847	.4000	-1.000
59	558	7.053	1.356	1.743E-03	.0256	2.104AE-03	.0309	2.347BE-03	.0344	.4000	1.000
60	552	1.250	.226	2.878E-04	.0042	3.468AE-04	.0051	3.865OE-04	.0057	.4000	.906
61	551	.679	.122	1.554E-04	.0023	1.872AE-04	.0027	2.086AE-04	.0031	.4000	.750
62	553	1.806	.297	3.662E-04	.0054	4.415OE-04	.0065	4.921OE-04	.0072	.4000	0
63	546	17.935	3.265	4.236E-03	.0621	5.124JE-03	.0751	5.724JE-03	.0839	.4500	-1.000
64	558	6.027	1.225	1.573E-03	.0231	1.899GE-03	.0279	2.119ZE-03	.0311	.4500	1.000
65	551	.826	.154	1.957E-04	.0029	2.358BE-04	.0035	2.628AE-04	.0039	.4500	.990
66	625	67.496	13.013	1.828E-02	.2681	2.205BE-02	.3301	2.544GE-02	.3732	.5000	-0
67	626	69.476	13.797	1.942E-02	.2848	2.342SE-02	.3509	2.706IE-02	.3968	.5000	-.277
68	624	68.314	13.962	1.957E-02	.2870	2.360BE-02	.3533	2.723AE-02	.3994	.5000	-.553
69	640	80.339	15.590	2.240E-02	.3284	2.771GE-02	.4064	3.145JE-02	.4612	.5000	-.830
70	596	41.618	8.155	1.102E-02	.1616	1.345OE-02	.1972	1.511GE-02	.2217	.5000	-1.000
72	559	5.356	1.090	1.402E-03	.0206	1.693OE-03	.0248	1.889ZE-03	.0277	.5000	1.000
73	552	.904	.169	2.151E-04	.0032	2.593OE-04	.0038	2.889BE-04	.0042	.5000	.886
74	551	.272	.049	6.265E-05	.0009	7.550SE-05	.0011	8.413GE-05	.0012	.5000	.640
75	552	1.457	.263	3.359E-04	.0049	4.049IE-04	.0059	4.512GE-04	.0066	.5000	0
76	630	73.674	12.563	1.779E-02	.2609	2.193JE-02	.3218	2.484JE-02	.3643	.5500	-0
77	597	2.780	.443	5.683E-04	.0083	6.850IE-04	.0101	7.651AE-04	.0112	.5500	-1.000
78	560	5.034	.775	9.981E-04	.0146	1.205GE-03	.0177	1.345AE-03	.0197	.5500	1.000
79	554	1.436	.246	3.420E-04	.0050	4.124OE-04	.0060	4.597ZE-04	.0067	.5500	.935
80	630	69.805	13.887	1.967E-02	.2884	2.372GE-02	.3557	2.746IE-02	.4027	.6000	-0
81	624	65.869	14.198	1.994E-02	.2924	2.404GE-02	.3600	2.775ZE-02	.4070	.6000	-.249
83	652	82.729	17.042	2.497E-02	.3662	3.103JE-02	.4591	3.532GE-02	.5180	.6000	-.748
84	534	.184	.037	4.615E-05	.0007	5.536OE-05	.0008	6.151GE-05	.0009	.6000	-1.000
85	562	4.218	1.130	1.458E-03	.0214	1.762ZE-03	.0258	1.967JE-03	.0288	.6000	1.000
86	556	2.237	.430	5.507E-04	.0081	6.644JE-04	.0097	7.409BE-04	.0109	.6000	.907
87	563	1.403	.266	3.140E-04	.0046	3.785IE-04	.0056	4.218AE-04	.0062	.6000	0
88	627	63.691	11.930	1.681E-02	.2466	2.071GE-02	.3038	2.343SE-02	.3437	.6500	-0
89	624	62.018	11.953	1.678E-02	.2460	2.068BE-02	.3028	2.334JE-02	.3423	.7000	-0
90	631	61.093	12.507	1.774E-02	.2602	2.189ZE-02	.3210	2.479IE-02	.3636	.7000	-.235
91	626	61.177	12.495	1.759E-02	.2579	2.166OE-02	.3176	2.449BE-02	.3592	.7000	-.469
92	632	64.294	12.437	1.767E-02	.2591	2.180JE-02	.3198	2.470IE-02	.3622	.7000	-.704
93	629	59.518	12.510	1.768E-02	.2593	2.180OE-02	.3197	2.467ZE-02	.3618	.7000	-.848
94	555	.131	.029	3.663E-05	.0005	4.418SE-05	.0006	4.926SE-05	.0007	.7000	1.000
95	556	1.704	.369	3.946E-04	.0058	4.759AE-04	.0070	5.306OE-04	.0078	.7000	.908
96	540	.744	.134	1.708E-04	.0025	2.058AE-04	.0030	2.293ZE-04	.0034	.7000	0
97	627	58.353	11.262	1.598E-02	.2329	1.956GE-02	.2869	2.213GE-02	.3246	.7500	-0
98	632	64.964	11.827	1.680E-02	.2464	2.073BE-02	.3041	2.349OE-02	.3445	.8000	-0

GROUP
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AEDC(AHO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL R
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
29	7	AAR-DWD	8.00	859.3	1339	49.96	-7.96	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RREF-FR (R= .009FT)	SIFR (R= .009FT)	SWITCH POSITION
97.0	.088	3.943	3861	7.610E-05	7.812E-08	3.70E 06	6.83AE-02	2.923E-02	2

TC NO	TW	DIMCT	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF
99	620	47.793	11.446	1.541E-02	.2324	1.9592E-02	.2868	2.2077E-02	.3230
100	617	47.970	11.467	1.548E-02	.2323	1.9494E-02	.2892	2.1998E-02	.3218
101	616	48.169	11.462	1.537E-02	.2305	2.00ABE-02	.2939	2.2662E-02	.3315
102	621	48.432	12.142	1.691E-02	.2474	2.0791E-02	.3042	2.3483E-02	.3435
103	620	48.824	10.743	1.497E-02	.2190	1.8400E-02	.2692	2.077ME-02	.3040
104	610	51.050	9.574	1.350E-02	.1974	1.6637E-02	.2434	1.882AE-02	.2754
105	608	44.404	9.000	1.231E-02	.1801	1.5073E-02	.2209	1.6976E-02	.2484
106	596	41.619	8.387	1.128E-02	.1651	1.3764E-02	.2014	1.5463E-02	.2262
107	621	53.083	9.918	1.342E-02	.1964	1.6475E-02	.2410	1.8594E-02	.2719
108	615	50.622	9.720	1.343E-02	.1964	1.6475E-02	.2410	1.8594E-02	.2719
109	597	1.831	.372	4.752E-04	.0070	5.7333E-04	.0084	4.3933E-04	.0094
110	555	1.691	.299	3.815E-04	.0056	4.6005E-04	.0067	5.128BE-04	.0075
111	596	1.356	.222	2.831E-04	.0041	3.4132E-04	.0050	3.8047E-04	.0056
112	631	91.069	10.165	1.436E-02	.2101	1.7716E-02	.2592	2.0057E-02	.2934
114	640	88.459	13.476	1.957E-02	.2863	2.420BE-02	.3541	2.7463E-02	.4018
115	646	64.384	13.262	1.914E-02	.2801	2.3710E-02	.3472	2.6960E-02	.3944
116	647	89.988	12.359	1.784E-02	.2612	2.2141E-02	.3239	2.5159E-02	.3681
117	632	94.540	11.169	1.580E-02	.2311	1.9449E-02	.2851	2.2067E-02	.3228
118	632	49.441	9.282	1.313E-02	.1921	1.6200E-02	.2370	1.8344E-02	.2684
119	541	8.027	1.590	2.043E-03	.0299	2.467AE-03	.0361	2.7540E-03	.0403
120	549	4.870	.568	7.088E-04	.0104	8.5306E-04	.0129	9.4992E-04	.0139
121	601	40.048	7.466	1.056F-02	.1560	1.3028E-02	.1906	1.4653E-02	.2144
122	615	47.258	8.273	1.163E-02	.1672	1.4021E-02	.2051	1.5816E-02	.2314
124	622	42.448	11.670	1.627E-02	.2379	1.9997E-02	.2926	2.2589E-02	.3305
126	616	51.825	9.075	1.254F-02	.1835	1.5394E-02	.2252	1.7367E-02	.2541
127	618	55.267	10.312	1.430F-02	.2092	1.7561E-02	.2569	1.9821E-02	.2900
128	647	66.913	9.576	1.384F-02	.2025	1.7147E-02	.2511	1.9508E-02	.2854
134	597	47.542	9.453	1.328F-02	.1943	1.6208E-02	.2371	1.8214E-02	.2665
135	595	48.924	9.035	1.215F-02	.1777	1.4813E-02	.2167	1.6639E-02	.2434
136	616	74.927	14.089	2.005F-02	.2933	2.4764E-02	.3623	2.8067E-02	.4106
137	618	74.625	13.194	1.883F-02	.2755	2.3277E-02	.3405	2.6396E-02	.3862
138	618	69.973	13.566	1.935F-02	.2831	2.3918E-02	.3499	2.7119E-02	.3967
140	627	69.951	10.889	1.529F-02	.2237	1.8830E-02	.2755	2.1295E-02	.3115
142	617	59.170	10.034	1.390F-02	.2034	1.7070E-02	.2497	1.9264E-02	.2818
147	596	43.648	8.309	1.118F-02	.1636	1.3643E-02	.1996	1.5328E-02	.2242
148	616	71.604	13.461	1.913F-02	.2799	2.3631E-02	.3457	2.6779E-02	.3918
149	604	62.407	10.012	1.362F-02	.1993	1.6656E-02	.2437	1.8744E-02	.2742
150	631	72.330	14.807	2.092F-02	.3060	2.5801E-02	.3775	2.9209E-02	.4273
151	627	73.480	15.016	2.109F-02	.3086	2.59A1E-02	.3801	2.9386E-02	.4299
152	623	67.387	12.220	1.707F-02	.2497	2.0994E-02	.3071	2.3723E-02	.3471
154	623	60.421	11.298	1.578F-02	.2308	1.9404E-02	.2839	2.1925E-02	.3208
156	620	44.284	8.909	1.239F-02	.1812	1.5224E-02	.2227	1.7191E-02	.2515
157	602	47.864	8.867	1.203F-02	.1759	1.4696E-02	.2150	1.6530E-02	.2418
163	596	41.634	9.828	1.322F-02	.1935	1.6131E-02	.2360	1.8122E-02	.2651
164	610	76.087	14.705	2.075F-02	.3034	2.55A2E-02	.3742	2.8954E-02	.4236
165	600	47.095	8.979	1.214F-02	.1776	1.4825E-02	.2169	1.6668E-02	.2438
166	629	72.375	13.566	1.909F-02	.2793	2.3526E-02	.3442	2.6617E-02	.3894
167	597	50.511	9.338	1.258F-02	.1841	1.5354E-02	.2246	1.7294E-02	.2524
168	620	41.660	12.564	1.748F-02	.2558	2.14A7E-02	.3143	2.4266E-02	.3550
169	586	43.414	7.991	1.059F-02	.1550	1.28A2E-02	.1884	1.4442E-02	.2113
170	587	40.272	7.408	9.849F-03	.1441	1.19A2E-02	.1753	1.3437E-02	.1966
171	596	46.744	8.637	1.163F-02	.1701	1.41A7E-02	.2075	1.5940E-02	.2332
172	623	45.241	11.829	1.652F-02	.2416	2.0314E-02	.2972	2.2953E-02	.3358
173	614	43.796	12.241	1.688F-02	.2469	2.0700E-02	.3028	2.3343E-02	.3415
175	606	53.321	11.094	1.513F-02	.2213	1.850AE-02	.2708	2.0835E-02	.3048
176	564	16.435	3.171	4.093F-03	.0599	4.94A2E-03	.0724	5.5256E-03	.0808
178	606	49.550	9.195	1.254F-02	.1834	1.5335E-02	.2243	1.7263E-02	.2525
183	577	26.549	3.830	5.027F-03	.0735	6.09AAE-03	.0892	6.8248E-03	.0999
184	602	44.902	8.317	1.128E-02	.1650	1.37A0E-02	.2016	1.5499E-02	.2267
185	611	49.719	9.250	1.271E-02	.1860	1.55A0E-02	.2279	1.7560E-02	.2569
186	597	43.631	8.062	1.086E-02	.1588	1.3246E-02	.1938	1.4883E-02	.2177
199	551	.331	.051	6.447F-05	.0009	7.7674E-05	.0011	8.6534E-05	.0013
130	550	.220	.037	4.741F-05	.0007	5.7108E-05	.0008	6.3614E-05	.0009
131	541	.292	.054	6.89AF-05	.0010	8.3052E-05	.0012	9.2518E-05	.0014
132	542	.596	.114	1.451F-04	.0021	1.74A4E-04	.0026	1.9479E-04	.0028
133	548	1.324	.232	2.926F-04	.0043	3.5222E-04	.0052	3.9215E-04	.0057
143	547	.700	.142	1.786F-04	.0026	2.1496E-04	.0031	2.3929E-04	.0035
145	547	.472	.080	1.010F-04	.0015	1.2154E-04	.0018	1.3531E-04	.0020
146	547	1.341	.234	2.95BF-04	.0043	3.5594E-04	.0052	3.9623E-04	.0058
158	545	1.399	.214	2.689F-04	.0039	3.2341E-04	.0047	3.5989E-04	.0053
159	545	1.181	.193	2.435F-04	.0036	2.92AAE-04	.0043	3.2594E-04	.0048
160	546	.833	.137	1.732F-04	.0025	2.0839E-04	.0030	2.3194E-04	.0034
161	545	.699	.122	1.537F-04	.0022	1.8491E-04	.0027	2.0577E-04	.0030
162	543	2.984	.407	5.110F-04	.0075	6.1439E-04	.0090	6.8353E-04	.0100
179	541	.735	.132	1.655E-04	.0024	1.9893E-04	.0029	2.2124E-04	.0032
180	542	.538	.097	1.214F-04	.0018	1.45A5E-04	.0021	1.6222E-04	.0024
181	542	.544	.068	8.546F-05	.0013	1.0271E-04	.0015	1.1425E-04	.0017
182	540	1.197	.202	2.528F-04	.0037	3.0371E-04	.0044	3.3773E-04	.0049
187	544	1.135	.186	2.335F-04	.0034	2.8074E-04	.0041	3.1236E-04	.0046
188	541	.841	.147	1.837F-04	.0027	2.2069E-04	.0032	2.4543E-04	.0036
189	539	.436	.074	9.231F-05	.0014	1.1085E-04	.0016	1.2323E-04	.0018
191	535	.859	.161	2.007F-04	.0029	2.4074E-04	.0035	2.6745E-04	.0039
192	544	2.792	.533	6.701F-04	.0098	8.05A3E-04	.0118	8.9659E-04	.0131
193	539	2.029	.353	4.418F-04	.0065	5.3065E-04	.0078	5.899AE-04	.0086
194	536	.730	.123	1.530F-04	.0022	1.8364E-04	.0027	2.0406E-04	.0030
195	534	1.107	.198	2.461F-04	.0036	2.9524E-04	.0043	3.2796E-04	.0048
197	537	2.780	.514	6.406F-04	.0094	7.6899E-04	.0112	8.5467E-04	.0125
198	535	1.043	.187	2.323F-04	.0034	2.7877E-04	.0041	3.0971E-04	.0045
200	533	1.502	.269	3.333F-04	.0049	3.9965E-04	.0058	4.4385E-04	.0065
201	540	5.642	1.075	1.346F-03	.0197	1.6172E-03	.0237	1.7983E-03	.0263
202	537	4.775	.545	6.787F-04	.0099	8.1460E-04	.0119	9.0525E-04	.0132
203	533	1.665	.190	2.351E-04	.0034	2.8186E-04	.0041	3.1302E-04	.0046
204	532	2.398	.288	3.541E-04	.0052	4.2457E-04	.0062	4.7146E-04	.0069

GROUP
93

FUSELAGE

X/L	Y/YMAX
.8000	-.423
.8000	-.446
.8000	-.669
.8000	-.806
.8500	-0
.9000	-0
.9000	-.226
.9000	-.452
.9000	-.678
.9000	-.817
.9000	1.000
.9000	.884
.9000	.610
.9500	-0
.9900	-0
.9900	-.253
.9900	-.507
.9900	-.660
.9900	-.793
.9900	.780
.9900	.305

LOWER WING SURFACE

X/C	Y/S
0	.050
0	.100
.2000	.100
.6000	.100
.7000	.100
.9000	.100
0	.150
0	.250
.1000	.250
.2000	.250
.4000	.250
.6000	.250
.8000	.250
.9000	.250
0	.450
.1000	.450
0	.500
.1000	.500
.2000	.500
.4000	.500
.6000	.500
.8000	.500
.9000	.500
0	.550
.1000	.550
0	.600
.1000	.600
0	.650
.1000	.650
0	.700
.1000	.700
0	.750
.1000	.750
.2000	.750
.4000	.750
.7000	.750
.8000	.750
0	.900
.2000	.900
.6000	.900
.8000	.900

UPPER WING SURFACE

X/C	Y/S
.1000	.100
.2000	.100
.4000	.100
.7000	.100
.9000	.100
.1000	.250
.4000	.250
.9000	.250
.1000	.500
.2000	.500
.4000	.500
.8000	.500
.7000	.750
.8000	.750
.2000	.900
.4000	.900
.8000	.900

VERTICAL STABILIZER

X/C	Z/S
0	.100
.1000	.100
.4000	.100
.8000	.100
0	.250
.1000	.250
.4000	.250
.8000	.250
.1000	.500
.4000	.500
.8000	.500
0	.750
.1000	.750
.4000	.750
.8000	.750

1096577

1096578

5/29/71

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V71162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
30	7	KAH-DWO	8.00	857.4	1337	40.01	1.99	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RREF-FR (R= .009FT)	SIFR (R= .009FT)	SWITCH POSITION
96.9	.668	3.934	3959	7.803E-05	7.803E-08	3.76E 06	6.826E-02	2.924E-02	1

TC NO	TH	DTHETA	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF	FUSELAGE X/L	FUSELAGE Y/YMAX	
1	608	187.345	34.799	4.770E-02	.6988	5.8411E-02	.8557	6.5797E-02	.9638	0	0	
2	591	161.882	27.121	3.633E-02	.5322	4.4256E-02	.6483	4.9676E-02	.7277	.0100	-0	
3	578	120.868	19.454	2.561E-02	.1752	3.1090E-02	.4554	3.4810E-02	.5099	.0100	-.441	
4	567	24.466	3.743	4.736E-03	.0694	5.7008E-03	.0835	6.3473E-03	.0930	.0100	-1.000	
5	539	5.090	.803	1.008E-03	.0147	1.2090E-03	.0177	1.3444E-03	.0197	.0100	0	
6	587	137.101	23.687	3.145E-02	.4621	3.8784E-02	.5621	4.3049E-02	.6306	.0200	-0	
7	596	139.702	25.807	3.480E-02	.5098	4.2443E-02	.6220	4.7713E-02	.6989	.0300	-0	
8	577	104.910	19.337	2.544E-02	.1727	3.0873E-02	.4527	3.4560E-02	.5063	.0300	-.303	
9	544	20.763	3.288	4.143E-03	.0607	4.9831E-03	.0730	5.5457E-03	.0812	.0300	-1.000	
10	540	5.852	1.051	1.319E-03	.0193	1.5846E-03	.0232	1.7622E-03	.0258	.0300	0	
11	584	122.301	24.510	3.254E-02	.4767	3.9546E-02	.5796	4.4354E-02	.6497	.0400	-0	
12	573	85.134	16.967	2.219E-02	.3251	2.6897E-02	.3940	3.0086E-02	.4407	.0500	-0	
13	568	72.199	14.359	1.866E-02	.2733	2.2584E-02	.3308	2.5239E-02	.1697	.0500	-.310	
14	548	21.280	3.721	4.712E-03	.0690	5.6724E-03	.0831	6.3162E-03	.0925	.0500	-1.000	
15	541	6.765	1.406	1.766E-03	.0259	2.1229E-03	.0311	2.3613E-03	.0346	.0500	0	
16	586	119.498	25.311	2.037E-02	.2984	2.4776E-02	.3629	2.7783E-02	.4070	.0800	-0	
17	573	72.029	12.361	1.617E-02	.2368	1.9594E-02	.2870	2.1917E-02	.3211	.0800	-.360	
18	549	15.349	2.602	3.301E-03	.0484	3.9760E-03	.0582	4.4259E-03	.0649	.0800	-1.000	
19	574	80.863	15.220	1.994E-02	.2922	2.4179E-02	.3542	2.7091E-02	.1963	.1000	-0	
20	583	42.143	6.399	8.483E-03	.1243	1.0311E-02	.1510	1.1556E-02	.1693	.1000	-.383	
21	568	44.538	10.690	1.308E-02	.2034	1.6804E-02	.2462	1.8774E-02	.2751	.1000	-.417	
22	545	11.044	1.998	2.521E-03	.0369	3.0325E-03	.0444	3.3751E-03	.0494	.1000	-1.000	
23	541	.954	.172	2.154E-04	.0032	2.5893E-04	.0038	2.8900E-04	.0042	.1000	.783	
24	543	6.604	1.260	1.586E-03	.0232	1.9066E-03	.0279	2.1213E-03	.0311	.1000	0	
25	555	41.978	8.521	1.049E-02	.1536	1.3138E-02	.1925	1.4648E-02	.2146	.1500	-.893	
26	540	9.991	1.998	2.455E-03	.0360	2.9501E-03	.0432	3.2808E-03	.0481	.1500	-1.000	
27	536	.842	.160	1.997E-04	.0029	2.3977E-04	.0035	2.6647E-04	.0039	.1500	.664	
28	540	6.545	1.033	1.296E-03	.0190	1.5566E-03	.0228	1.7310E-03	.0254	.1500	0	
29	563	87.855	15.973	2.063E-02	.3023	2.4962E-02	.3656	2.7850E-02	.4080	.2000	-0	
30	544	90.436	17.941	2.319E-02	.3397	2.8036E-02	.4107	3.1308E-02	.4586	.2000	-.278	
31	561	81.508	17.043	2.194E-02	.3215	2.6510E-02	.3883	2.9588E-02	.4334	.2000	-.466	
32	552	50.172	9.895	1.260E-02	.1846	1.5190E-02	.2225	1.6927E-02	.2480	.2000	-.792	
33	548	13.065	2.347	2.945E-03	.0431	3.5388E-03	.0518	3.9357E-03	.0577	.2000	-1.000	
34	532	.835	.158	1.965E-04	.0029	2.3566E-04	.0035	2.6171E-04	.0038	.2000	.888	
35	533	3.017	.548	6.710E-04	.0098	8.0478E-04	.0118	8.9391E-04	.0131	.2000	0	
36	535	7.840	1.277	1.592E-03	.0233	1.9103E-03	.0280	2.1227E-03	.0311	.2100	0	
37	536	7.189	1.288	1.606E-03	.0235	1.9276E-03	.0282	2.1420E-03	.0314	.2200	0	
38	534	4.364	.687	8.544E-04	.0125	1.0250E-03	.0150	1.1387E-03	.0167	.2300	0	
39	533	3.506	.644	8.012E-04	.0125	1.0210E-03	.0159	1.1341E-03	.0166	.2400	.486	
40	532	1.979	.311	3.864E-04	.0057	4.6339E-04	.0069	5.1466E-04	.0075	.2500	0	
41	534	1.095	.212	2.633E-04	.0039	3.1583E-04	.0046	3.5044E-04	.0051	.2700	.465	
42	533	.925	.146	2.307E-04	.0034	2.7674E-04	.0041	3.0740E-04	.0045	.2700	.465	
43	533	.903	.137	1.704E-04	.0025	2.0438E-04	.0030	2.2701E-04	.0033	.2700	0	
44	593	79.675	14.253	1.914F-02	.2804	2.3337E-02	.3419	2.6206E-02	.3839	.3000	-0	
45	590	76.808	14.579	1.951F-02	.2858	2.3764E-02	.3481	2.6671E-02	.3907	.3000	-.312	
46	592	75.252	15.979	2.142F-02	.3137	2.6096E-02	.3823	2.9296E-02	.4292	.3000	-.504	
47	576	44.115	8.607	8.655F-03	.1268	1.0494E-02	.1537	1.1741E-02	.1720	.3000	-.857	
48	561	17.929	3.043	3.870F-03	.0567	4.6628E-03	.0683	5.1952E-03	.0761	.3000	-1.000	
49	519	3.860	.756	9.471F-04	.0139	1.1378E-03	.0167	1.2651E-03	.0185	.3000	.983	
50	538	1.254	.246	3.075F-04	.0045	3.6925E-04	.0054	4.1049E-04	.0060	.3000	.853	
51	536	.544	.112	1.400F-04	.0021	1.6810E-04	.0025	1.8684E-04	.0027	.3000	.431	
52	536	.593	.122	1.526F-04	.0022	1.8316E-04	.0027	2.0354E-04	.0030	.3000	.361	
53	535	.972	.166	2.040F-04	.0030	2.4483E-04	.0036	2.7205E-04	.0040	.3000	0	
54	593	66.815	13.449	1.807F-02	.2648	2.2035E-02	.3228	2.4747E-02	.3625	.4000	-0	
55	595	70.008	14.109	1.901F-02	.2784	2.3187E-02	.3397	2.6051E-02	.3816	.4000	-.321	
56	598	73.317	14.787	1.999F-02	.2928	2.4398E-02	.3574	2.7424E-02	.4017	.4000	-.526	
57	579	43.802	7.749	1.027F-02	.1504	1.2469E-02	.1827	1.3965E-02	.2044	.4000	-.951	
58	558	21.032	3.813	4.888F-03	.0716	5.9002E-03	.0864	6.5812E-03	.0964	.4000	-1.000	
59	569	8.266	1.581	2.009F-03	.0294	2.4141E-03	.0354	2.6866E-03	.0394	.4000	1.000	
60	562	2.559	.460	5.786F-04	.0085	6.9556E-04	.0102	7.7378E-04	.0113	.4000	.906	
61	541	.746	.134	1.678F-04	.0025	2.0170E-04	.0030	2.2435E-04	.0033	.4000	.750	
62	540	1.532	.242	3.033F-04	.0044	3.6445E-04	.0053	4.0531E-04	.0059	.4000	0	
63	556	19.808	3.588	4.593F-03	.0673	5.5411E-03	.0812	6.1792E-03	.0905	.4500	-1.000	
64	549	7.089	1.434	1.820F-03	.0267	2.1914E-03	.0321	2.4407E-03	.0358	.4500	1.000	
65	543	2.261	.419	5.275F-04	.0077	6.3426E-04	.0093	7.0569E-04	.0103	.4500	.990	
66	613	84.225	12.317	1.699F-02	.2489	2.0836E-02	.3052	2.3494E-02	.3442	.5000	-0	
67	612	83.688	12.573	1.734F-02	.2541	2.1267E-02	.3115	2.3979E-02	.3513	.5000	-.277	
68	612	87.590	13.724	1.893F-02	.2773	2.3215E-02	.3401	2.6175E-02	.3834	.5000	-.553	
69	624	78.078	15.051	2.111E-02	.3092	2.5984E-02	.3806	2.9375E-02	.4303	.5000	-.830	
70	590	42.926	8.388	1.123F-02	.1645	1.3676E-02	.2003	1.5349E-02	.2248	.5000	-1.000	
72	554	6.655	1.350	1.724F-03	.0253	2.0788E-03	.0305	2.3174E-03	.0339	.5000	1.000	
73	548	1.690	.314	3.979F-04	.0058	4.7902E-04	.0070	5.3342E-04	.0078	.5000	.886	
74	547	.652	.117	1.486F-04	.0022	1.7882E-04	.0026	1.9909E-04	.0029	.5000	.640	
75	548	1.841	.332	4.205F-04	.0062	5.0624E-04	.0074	5.6371E-04	.0083	.5000	0	
76	623	88.998	11.730	1.642F-02	.2406	2.0205E-02	.2960	2.2836E-02	.3345	.5500	-0	
77	560	3.130	.699	8.422F-04	.0094	7.7567E-04	.0114	8.6560E-04	.0127	.5500	-1.000	
78	562	5.075	.782	1.008F-03	.0148	1.2182E-03	.0178	1.3598E-03	.0199	.5500	1.000	
79	556	1.923	.355	4.588F-04	.0067	5.5354E-04	.0081	6.1722E-04	.0090	.5500	.935	
80	623	82.581	12.409	1.736F-02	.2543	2.1353E-02	.3129	2.4130E-02	.3535	.6000	-0	
81	618	80.885	13.084	1.820F-02	.2666	2.2354E-02	.3275	2.5238E-02	.3697	.6000	-.249	
83	639	78.092	16.039	2.297F-02	.3365	2.8414E-02	.4162	3.2232E-02	.4722	.6000	-.748	
84	528	.094	.019	2.379F-05	.0003	2.8503E-05	.0004	3.1636E-05	.0005	.6000	-1.000	
85	564	7.994	1.454	1.878E-03	.0275	2.2710E-03	.0333	2.5354E-03	.0371	.6000	1.000	
86	557	1.866	.359	4.594F-04	.0067	5.5435E-04	.0081	6.1825E-04	.0091	.6000	.907	
87	552	1.443	.253	3.222F-04	.0047	3.8835E-04	.0057	4.3279E-04	.0063	.6000	0	
88	620	82.206	11.615	1.618F-02	.2370	1.9886E-02	.2913	2.2457E-02	.3290	.6500	-0	
89	618	88.749	11.295	1.570E-02	.2300	1.9291E-02	.2826	2.1779E-02	.3190	.7000	-0	
90	623	88.827	11.999	1.679E-02	.2459	2.0652E-02	.3025	2.3338E-02	.3419	.7000	-.235	
91	617	87.174	11.631	1.614F-02	.2364	1.9811E-02	.2902	2.2357E-02	.3275	.7000	-.469	
92	624	81.347	11.822	1.656F-02	.2426	2.0378E-02	.2985	2.3033E-02	.3374	.7000	-.704	
93	621	87.766	12.160	1.689F-02	.2474	2.0767E-02	.3042	2.3460E-02	.3437	.7000	-.848	
94	558	.368	.080	1.032F-04	.0015	1.2461E-04	.0018	1.3901E-04	.0020	.7000	1.000	
95	559	2.981	.541	6.965F-04	.0102	8.3850E-04	.0123	9.3550E-04	.0137	.7000	.908	
96	555	1.767	.320	4.084F-04	.0060	4.9257E-04	.0072	5.4914E-04	.0080	.7000	0	
97	623	53.454	10.299	1.442F-02	.2112	1.7741E-02	.2599	2.0050E-02	.2937	.7500	-0	
98	624	49.333	10.784	1.509F-02	.2211	1.8576E-02	.2721	2.1000E-02	.3076	.8000	-0	

GROUP
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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL A
VTI162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
30	7	KAH-DNO	8.00	856.6	1337	19.98	2.02	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .009FT)	STFR (R= .009FT)	SWITCH POSITION
96.9	.088	3.931	3859	7.596E-05	7.802E-08	3.76E 06	6.823E-02	2.925E-02	2

TC NO	TM	DIRECT	Q-DOT	M(TO)	M(TO)/HREF	M(.9TO)	M(.9TO)/HREF	M(.8STO)	M(.8STO)/HREF
									FUSELAGE X/L Y/YMAX
99	611	52.389	10.345	1.429E-02	.2094	1.7521E-02	.2568	1.9759E-02	.2896 .0000 -.223
100	612	52.538	10.371	1.431E-02	.2097	1.7561E-02	.2571	1.9777E-02	.2899 .0000 -.446
101	613	51.998	11.145	1.538E-02	.2254	1.8897E-02	.2744	2.1262E-02	.3116 .0000 -.669
102	618	53.536	11.583	1.599E-02	.2344	1.9647E-02	.2879	2.2180E-02	.3251 .0000 -.806
103	613	66.078	9.758	1.293E-02	.1894	1.5895E-02	.2329	1.7880E-02	.2621 .0500 -0
104	616	63.760	8.158	1.131E-02	.1657	1.3877E-02	.2034	1.5654E-02	.2295 .0000 -0
105	602	38.152	7.711	1.049E-02	.1537	1.2823E-02	.1879	1.4428E-02	.2114 .0000 -.246
106	592	36.123	7.241	9.750E-03	.1429	1.1882E-02	.1741	1.3361E-02	.1959 .0000 -.492
107	613	66.745	8.702	1.201E-02	.1760	1.4728E-02	.2158	1.6607E-02	.2434 .0000 -.678
108	607	64.006	8.420	1.154E-02	.1691	1.4174E-02	.2078	1.5908E-02	.2331 .0000 -.817
109	544	.981	.196	2.934E-04	.0037	3.0634E-04	.0049	3.4211E-04	.0050 .0000 1.000
110	547	1.049	.191	2.498E-04	.0036	2.9706E-04	.0044	3.3162E-04	.0049 .0000 .884
111	541	.989	.160	2.062E-04	.0030	2.4913E-04	.0037	2.7807E-04	.0041 .0000 .610
112	615	39.738	7.885	1.008E-02	.1395	1.3395E-02	.1997	1.5068E-02	.2208 .0500 -0
114	618	52.062	10.341	1.431E-02	.2098	1.7578E-02	.2574	1.9842E-02	.2908 .0000 -0
115	620	49.464	10.079	1.406E-02	.2060	1.7282E-02	.2533	1.9520E-02	.2861 .0000 -.253
116	622	47.974	9.782	1.367E-02	.2004	1.6817E-02	.2464	1.9001E-02	.2785 .0000 -.507
117	615	44.718	9.045	1.257E-02	.1843	1.5410E-02	.2261	1.7405E-02	.2551 .0000 -.660
118	616	37.843	7.053	9.773E-03	.1432	1.1995E-02	.1758	1.3534E-02	.1984 .0000 -.793
119	540	4.104	.812	1.045E-03	.0153	1.2618E-03	.0185	1.4040E-03	.0206 .0000 .780
120	551	2.487	.286	3.634E-04	.0053	4.3778E-04	.0064	4.8773E-04	.0071 .0000 .305
									LOWER WING SURFACE X/C Y/S
121	615	48.343	9.552	1.322E-02	.1937	1.6217E-02	.2377	1.8294E-02	.2681 0 .050
122	628	57.128	10.058	1.419E-02	.2079	1.7488E-02	.2563	1.9788E-02	.2900 0 .100
124	621	41.118	11.421	1.595E-02	.2338	1.9617E-02	.2875	2.2162E-02	.3248 .2000 .100
126	610	45.585	7.961	1.094E-02	.1604	1.3465E-02	.1965	1.5106E-02	.2214 .6000 .100
127	610	48.265	8.976	1.235E-02	.1810	1.5132E-02	.2218	1.7055E-02	.2500 .7000 .100
128	628	48.734	8.337	1.175E-02	.1722	1.4470E-02	.2121	1.6376E-02	.2400 .9000 .100
134	612	59.662	12.451	1.718E-02	.2517	2.1064F-02	.3087	2.3750E-02	.3481 0 .150
135	609	62.139	11.550	1.587E-02	.2325	1.9438E-02	.2849	2.1903E-02	.3210 0 .250
136	618	71.583	15.355	2.197E-02	.3220	2.7170E-02	.3982	3.0816E-02	.4516 .1000 .250
137	635	73.869	13.046	1.859E-02	.2724	2.2963E-02	.3365	2.6026E-02	.3814 .2000 .250
138	627	64.650	12.474	1.795E-02	.2572	2.1615E-02	.3168	2.4447E-02	.3583 .4000 .250
140	617	63.133	9.610	1.334E-02	.1955	1.6385E-02	.2401	1.8494E-02	.2710 .6000 .250
142	604	49.449	8.335	1.136E-02	.1665	1.3896E-02	.2037	1.5639E-02	.2292 .9000 .250
147	611	56.620	10.850	1.493E-02	.2189	1.8303E-02	.2682	2.0630E-02	.3024 0 .450
148	638	80.235	15.191	2.161E-02	.3167	2.6721E-02	.3916	3.0307E-02	.4442 .1000 .450
149	617	85.080	12.546	1.736E-02	.2545	2.1321E-02	.3125	2.4044E-02	.3527 0 .500
150	635	80.564	10.516	1.450E-02	.2445	2.9029E-02	.4254	3.2895E-02	.4821 .1000 .500
151	625	74.727	15.294	2.140E-02	.3136	2.6343E-02	.3861	2.9782E-02	.4365 .2000 .500
152	616	64.148	11.597	1.608F-02	.2357	1.9742E-02	.2893	2.2278E-02	.3265 .4000 .500
154	614	55.877	10.406	1.438E-02	.2107	1.7638E-02	.2585	1.9842E-02	.2915 .6000 .500
156	606	44.562	7.248	9.937E-03	.1456	1.2161E-02	.1782	1.3693F-02	.2007 .8000 .500
157	590	39.008	7.194	9.607E-03	.1408	1.1700E-02	.1715	1.3129E-02	.1924 .9000 .500
163	608	68.192	13.052	1.790F-02	.2623	2.1918E-02	.3212	2.4690E-02	.3619 0 .550
164	633	64.447	16.335	2.320F-02	.3400	2.8637E-02	.4197	3.2439E-02	.4754 .1000 .550
169	613	60.050	11.519	1.590F-02	.2331	1.9504E-02	.2858	2.1994E-02	.3223 0 .600
166	612	80.740	15.157	2.149E-02	.3150	2.6525E-02	.3887	3.0040E-02	.4403 .1000 .600
167	608	62.641	11.646	1.597E-02	.2341	1.9557E-02	.2866	2.2031E-02	.3229 0 .650
168	623	73.964	15.070	2.113F-02	.3097	2.6002E-02	.3811	2.9389E-02	.4307 .1000 .650
169	597	63.851	9.961	1.366F-02	.1973	1.6427E-02	.2408	1.8463E-02	.2706 0 .700
170	587	44.339	8.157	1.087E-02	.1593	1.3229E-02	.1939	1.4839E-02	.2175 .1000 .700
171	611	60.490	11.253	1.550F-02	.2271	1.8995E-02	.2784	2.1412E-02	.3138 0 .750
172	628	74.121	13.469	1.839F-02	.2783	2.3401E-02	.3430	2.6477E-02	.3880 .1000 .750
173	616	72.468	13.919	1.930E-02	.2828	2.3687E-02	.3471	2.6728E-02	.3917 .2000 .750
175	601	51.122	10.611	1.440E-02	.2111	1.7594E-02	.2579	1.9788E-02	.2900 .4000 .750
176	568	13.675	2.643	3.435F-03	.0503	4.1574E-03	.0609	4.6460E-03	.0681 .7000 .750
178	593	43.684	8.061	1.084F-02	.1588	1.3212E-02	.1936	1.4838E-02	.2175 .8000 .750
183	584	28.379	4.106	5.449F-03	.0799	6.6240E-03	.0971	7.4248E-03	.1088 0 .900
184	602	48.407	8.967	1.219E-02	.1787	1.4899E-02	.2184	1.6761E-02	.2457 .2000 .900
185	601	46.255	8.566	1.164E-02	.1706	1.4223E-02	.2084	1.5999E-02	.2345 .6000 .900
186	587	40.266	7.498	9.874F-03	.1447	1.2016E-02	.1761	1.3478E-02	.1975 .8000 .900
									UPPER WING SURFACE X/C Y/S
129	560	.763	.118	1.511E-04	.0022	1.8250E-04	.0027	2.0365E-04	.0030 .1000 .100
130	559	.462	.079	1.012F-04	.0015	1.2216F-04	.0018	1.3630E-04	.0020 .2000 .100
131	560	.200	.037	4.805F-05	.0007	5.8040E-05	.0009	6.4772E-05	.0009 .4000 .100
132	561	.565	.109	1.401E-04	.0021	1.6921E-04	.0025	1.8878E-04	.0028 .7000 .100
133	554	1.262	.222	2.828F-04	.0041	3.4108E-04	.0050	3.8022E-04	.0056 .9000 .100
143	553	1.367	.277	3.535E-04	.0052	4.2625E-04	.0062	4.7510E-04	.0070 .1000 .250
145	555	.488	.083	1.057E-04	.0015	1.2746E-04	.0019	1.4210E-04	.0021 .4000 .250
146	552	1.130	.198	2.521E-04	.0037	3.0384E-04	.0045	3.3859E-04	.0050 .9000 .250
150	549	1.879	.298	3.652F-04	.0054	4.3988E-04	.0064	4.8996E-04	.0072 .1000 .500
159	550	1.007	.165	2.100F-04	.0031	2.5301E-04	.0037	2.8185E-04	.0041 .2000 .500
160	552	.704	.116	1.472E-04	.0022	1.7744E-04	.0026	1.9773E-04	.0029 .4000 .500
161	550	.561	.098	1.248F-04	.0018	1.5035E-04	.0022	1.6750E-04	.0025 .8000 .500
162	547	2.134	.291	3.690F-04	.0054	4.4414E-04	.0065	4.9452E-04	.0072 .9000 .500
179	546	.494	.089	1.129F-04	.0017	1.3585E-04	.0020	1.5123E-04	.0022 .1000 .750
180	547	.327	.059	7.450F-05	.0011	8.9667E-05	.0013	9.9830E-05	.0015 .2000 .750
181	548	.337	.042	5.369F-05	.0008	6.4638E-05	.0009	7.1975E-05	.0011 .4000 .750
182	544	.901	.152	1.920E-04	.0028	2.3097E-04	.0034	2.5703E-04	.0038 .8000 .750
									VERTICAL STABILIZER X/C Z/S
187	550	.978	.161	2.041E-04	.0030	2.4596E-04	.0036	2.7387E-04	.0040 0 .100
188	546	.711	.124	1.571E-04	.0023	1.8907E-04	.0028	2.1048E-04	.0031 .1000 .100
189	543	.650	.110	1.382F-04	.0020	1.6614E-04	.0024	1.8485E-04	.0027 .4000 .100
191	537	.421	.090	1.000F-04	.0015	1.2007E-04	.0018	1.3347E-04	.0020 .8000 .100
192	548	1.559	.298	3.779E-04	.0055	4.5497E-04	.0067	5.0665E-04	.0074 0 .250
193	544	1.500	.262	3.297E-04	.0048	3.9653E-04	.0058	4.4123E-04	.0065 .1000 .250
194	540	1.097	.184	2.310F-04	.0034	2.7790E-04	.0041	3.0857E-04	.0045 .4000 .250
195	536	1.141	.209	2.558F-04	.0037	3.0703E-04	.0045	3.4121E-04	.0050 .8000 .250
197	539	2.584	.478	5.994E-04	.0088	7.2011E-04	.0106	8.0071E-04	.0117 .1000 .500
198	538	1.781	.328	3.997E-04	.0059	4.7996E-04	.0070	5.3395E-04	.0078 .4000 .500
200	534	2.249	.403	5.015E-04	.0074	6.0174E-04	.0088	6.6854E-04	.0098 .8000 .500
201	541	3.137	.597	7.495E-04	.0110	9.0073E-04	.0132	1.0018E-03	.0147 0 .750
202	538	3.703	.423	5.286E-04	.0077	6.3481E-04	.0093	7.0568E-04	.0103 .1000 .750
203	535	2.647	.302	3.757E-04	.0055	4.5075E-04	.0066	5.0080E-04	.0073 .4000 .750
204	534	5.437	.648	8.069E-04	.0118	9.6806E-04	.0142	1.0795E-03	.0158 .8000 .750

GROUP
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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
33	7	AAH-D#0	8.00	856.1	1339	29.96	12.04	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FR (M= .009FT)	STFR (M= .009FT)	SWITCH POSITION
97.0	.088	3.929	5462	7.581E-05	7.813E-08	3.78E 06	6.823E-02	2.928E-02	1

TC NO	TW	DTWDT	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF	FUSELAGE X/L	FUSELAGE Y/YMAX
1	610	201.934	37.869	5.337E-02	.7822	6.5785E-02	.9642	7.4446E-02	1.0911	0	-0
2	597	145.307	24.419	3.291E-02	.4824	4.0161E-02	.5886	4.5131E-02	.6615	.0100	-0
3	584	105.337	17.003	2.251E-02	.3299	2.7362E-02	.4010	3.0667E-02	.4495	.0100	-.441
4	560	74.241	4.503	5.777E-03	.0847	6.9763E-03	.1022	7.7825E-03	.1141	.0100	-1.000
5	549	5.817	.615	7.779E-04	.0114	9.3664E-04	.0137	1.0430E-03	.0153	.0100	0
6	594	128.767	22.329	2.998E-02	.4393	3.6546E-02	.5356	4.1045E-02	.6016	.0200	-0
7	592	121.794	22.459	3.006E-02	.4406	3.6625E-02	.5368	4.1115E-02	.6026	.0300	-0
8	583	94.524	16.828	2.225E-02	.3260	2.7032E-02	.3962	3.0290E-02	.4439	.0300	-.303
9	555	21.334	3.394	4.328E-03	.0634	5.2193E-03	.0765	5.8144E-03	.0853	.0300	-1.000
10	550	4.829	.872	1.105E-03	.0162	1.3310E-03	.0195	1.4825E-03	.0217	.0300	0
11	589	108.117	21.719	2.845E-02	.4244	3.5247E-02	.5166	3.9544E-02	.5796	.0400	-0
12	576	88.650	13.706	1.797E-02	.2633	2.1791E-02	.3194	2.4387E-02	.3574	.0500	-0
13	574	61.220	12.209	1.596E-02	.2339	1.9342E-02	.2835	2.1637E-02	.3171	.0500	-.310
14	558	20.886	3.672	4.701F-03	.0689	5.6734E-03	.0832	6.3281E-03	.0927	.0500	-1.000
15	552	8.112	1.272	1.615E-03	.0237	1.9462E-03	.0285	2.1684E-03	.0318	.0500	0
16	587	90.702	11.628	1.545E-02	.2265	1.8800E-02	.2755	2.1043E-02	.3090	.0800	-0
17	571	44.922	7.702	1.002E-02	.1469	1.2140E-02	.1779	1.3573E-02	.1989	.0800	-.360
18	560	12.448	2.122	2.722E-03	.0399	3.2872E-03	.0482	3.6677E-03	.0538	.0800	-1.000
19	573	50.194	9.449	1.233E-02	.1807	1.4943E-02	.2190	1.6713E-02	.2450	.1000	-0
20	588	88.834	5.374	7.150E-03	.1048	8.7008E-03	.1275	9.7589E-03	.1430	.1000	-.383
21	573	49.374	8.201	1.071E-02	.1569	1.2973E-02	.1901	1.4511E-02	.2127	.1000	-.817
22	556	8.734	1.582	2.020E-03	.0296	2.4365E-03	.0357	2.7167E-03	.0398	.1000	-1.000
23	553	1.115	.202	2.564E-04	.0038	3.0902E-04	.0045	3.4436E-04	.0050	.1000	.783
24	585	6.378	1.224	1.560E-03	.0229	1.8816E-03	.0276	2.0974E-03	.0307	.1000	0
25	568	43.213	8.830	1.145E-02	.1678	1.3852E-02	.2030	1.5478E-02	.2268	.1500	-.893
26	552	8.225	1.622	2.059E-03	.0302	2.4810E-03	.0364	2.7641E-03	.0405	.1500	-1.000
27	547	1.066	.204	2.574E-04	.0038	3.0972E-04	.0045	3.4479E-04	.0051	.1500	.664
28	552	7.583	1.204	1.529E-03	.0224	1.8424E-03	.0270	2.0526E-03	.0301	.1500	0
29	569	66.407	12.111	1.573F-02	.2306	1.9045E-02	.2791	2.1287E-02	.3120	.2000	-0
30	567	70.194	13.947	1.805E-02	.2645	2.1835E-02	.3200	2.4392E-02	.3575	.2000	-.278
31	567	63.606	13.344	1.729F-02	.2533	2.0913E-02	.3065	2.3366E-02	.3425	.2000	-.466
32	559	43.527	8.616	1.105F-02	.1619	1.3336E-02	.1954	1.4878E-02	.2180	.2000	-.792
33	549	12.909	2.330	2.950E-03	.0432	3.5521E-03	.0521	3.9559E-03	.0580	.2000	-1.000
34	540	.777	.148	1.851E-04	.0027	2.2234E-04	.0033	2.4722E-04	.0036	.2000	.888
35	542	6.630	1.192	1.496E-03	.0219	1.7978E-03	.0263	1.9947E-03	.0293	.2000	0
36	548	17.541	2.877	3.637E-03	.0533	4.3779E-03	.0642	4.8747E-03	.0714	.2100	0
37	546	12.958	2.334	2.941E-03	.0431	3.5384E-03	.0519	3.9381E-03	.0577	.2200	0
38	544	9.556	1.511	1.899F-03	.0278	2.2835E-03	.0335	2.5405E-03	.0372	.2300	0
39	539	4.583	.897	1.121E-03	.0164	1.3460E-03	.0197	1.4966E-03	.0219	.2400	.486
40	539	4.536	.715	8.939F-04	.0131	1.0735E-03	.0157	1.1934E-03	.0175	.2500	0
41	537	1.338	.269	3.353F-04	.0049	4.0251E-04	.0059	4.4734E-04	.0066	.2700	.465
42	537	1.809	.366	4.536E-04	.0066	5.4454E-04	.0080	6.0522E-04	.0089	.2700	.465
43	537	1.843	.280	3.498E-04	.0051	4.1991E-04	.0062	4.6670E-04	.0068	.2700	0
44	579	61.761	10.974	1.443E-02	.2115	1.7320E-02	.2568	1.9617E-02	.2875	.3000	-0
45	577	57.701	10.884	1.428F-02	.2093	1.7322E-02	.2539	1.9389E-02	.2842	.3000	-.312
46	580	63.650	13.435	1.769F-02	.2592	2.1472E-02	.3147	2.4045E-02	.3524	.3000	-.504
47	569	39.764	5.934	7.708E-03	.1130	9.3318E-03	.1368	1.0430E-02	.1529	.3000	-.857
48	551	10.485	3.136	3.976E-03	.0583	4.7898E-03	.0702	5.3354E-03	.0782	.3000	-1.000
49	540	4.119	.807	1.009E-03	.0148	1.2116E-03	.0178	1.3471E-03	.0197	.3000	.983
50	539	1.529	.299	3.741E-04	.0055	4.4933E-04	.0066	4.9954E-04	.0073	.3000	.853
51	537	.830	.171	2.138E-04	.0031	2.5667E-04	.0038	2.8526E-04	.0042	.3000	.433
52	537	.744	.154	1.914F-04	.0028	2.2978E-04	.0034	2.5536E-04	.0037	.3000	.361
53	537	1.278	.215	2.685E-04	.0039	3.2233E-04	.0047	3.5824E-04	.0053	.3000	0
54	573	54.964	10.958	1.431E-02	.2097	1.7340E-02	.2541	1.9395E-02	.2843	.4000	-0
55	576	58.587	11.693	1.531F-02	.2244	1.8570E-02	.2722	2.0780E-02	.3046	.4000	-.321
56	579	64.337	12.864	1.693F-02	.2481	2.0553E-02	.3012	2.3015E-02	.3373	.4000	-.526
57	572	45.175	7.998	1.042E-02	.1527	1.2622E-02	.1850	1.4113E-02	.2069	.4000	-.951
58	552	22.196	4.012	5.095E-03	.0747	6.1398E-03	.0900	6.8409E-03	.1003	.4000	-1.000
59	544	9.415	1.797	2.260E-03	.0331	2.7172E-03	.0398	3.0233E-03	.0443	.4000	1.000
60	538	3.350	.603	7.521F-04	.0110	9.0310E-04	.0132	1.0038E-03	.0147	.4000	.906
61	537	1.365	.245	3.049E-04	.0045	3.6594E-04	.0054	4.0665E-04	.0060	.4000	.750
62	537	1.999	.315	3.924E-04	.0058	4.7102E-04	.0069	5.2345E-04	.0077	.4000	0
63	568	20.319	3.664	4.629F-03	.0678	5.5720E-03	.0817	6.2038E-03	.0909	.4500	-1.000
64	541	7.418	1.495	1.874E-03	.0275	2.2516E-03	.0330	2.5042E-03	.0367	.4500	1.000
65	537	3.032	.560	6.985E-04	.0102	8.3851E-04	.0123	9.3192E-04	.0137	.4500	.990
66	582	55.157	10.430	1.378E-02	.2019	1.6738E-02	.2453	1.8754E-02	.2749	.5000	-0
67	583	56.884	11.079	1.466F-02	.2148	1.7816E-02	.2611	1.9965E-02	.2926	.5000	-.277
68	584	58.093	11.643	1.542E-02	.2261	1.8751E-02	.2748	2.1018E-02	.3080	.5000	-.553
69	596	69.846	13.296	1.789F-02	.2622	2.1826E-02	.3199	2.4521E-02	.3594	.5000	-.830
70	575	43.898	8.513	1.113F-02	.1632	1.3495E-02	.1978	1.5098E-02	.2213	.5000	-1.000
72	544	7.940	1.602	2.014E-03	.0295	2.4213E-03	.0355	2.6939E-03	.0395	.5000	1.000
73	538	2.107	.389	4.861E-04	.0071	5.8367E-04	.0086	6.4878E-04	.0095	.5000	.886
74	537	.684	.123	1.530E-04	.0022	1.8369E-04	.0027	2.0416E-04	.0030	.5000	.640
75	538	1.812	.325	4.057E-04	.0059	4.8709E-04	.0071	5.4143E-04	.0079	.5000	0
76	586	60.221	10.068	1.337F-02	.1960	1.6265E-02	.2384	1.8238E-02	.2673	.5500	-0
77	541	3.589	.567	7.104E-04	.0104	8.5372E-04	.0125	9.4949E-04	.0139	.5500	-1.000
78	544	6.001	.916	1.152E-03	.0169	1.3849E-03	.0203	1.5408E-03	.0226	.5500	1.000
79	540	2.363	.437	5.473E-04	.0080	6.5752E-04	.0096	7.3112E-04	.0107	.5500	.935
80	586	54.379	10.606	1.409E-02	.2064	1.7133E-02	.2511	1.9211E-02	.2816	.6000	-0
81	584	52.817	11.170	1.478E-02	.2166	1.7965E-02	.2633	2.0133E-02	.2951	.6000	-.249
83	601	68.867	13.919	1.886E-02	.2764	2.3044E-02	.3377	2.5917E-02	.3798	.6000	-.748
84	529	.034	.007	8.520E-06	.0001	1.0208E-05	.0001	1.1330E-05	.0002	.6000	-1.000
85	545	5.699	1.026	1.291F-03	.0189	1.5526E-03	.0228	1.7276E-03	.0253	.6000	1.000
86	542	1.735	.331	4.152E-04	.0061	4.9904E-04	.0073	5.5510E-04	.0081	.6000	.907
87	542	1.743	.304	3.809E-04	.0056	4.5779E-04	.0067	5.0916E-04	.0075	.6000	0
88	585	52.115	9.576	1.269E-02	.1860	1.5429E-02	.2261	1.7295E-02	.2535	.6500	-0
89	589	49.446	9.381	1.251E-02	.1833	1.5229E-02	.2232	1.7086E-02	.2504	.7000	-0
90	593	49.636	9.991	1.339E-02	.1963	1.6322E-02	.2392	1.8328E-02	.2686	.7000	-.235
91	588	47.298	9.497	1.264E-02	.1853	1.5387E-02	.2255	1.7259E-02	.2530	.7000	-.469
92	594	51.652	9.823	1.318E-02	.1932	1.6071E-02	.2355	1.8049E-02	.2645	.7000	-.704
93	593	50.039	10.351	1.388E-02	.2034	1.6912E-02	.2479	1.8990E-02	.2783	.7000	-.848
94	547	1.041	.228	2.871E-04	.0042	3.4553E-04	.0051	3.8465E-04	.0056	.7000	1.000
95	549	3.270	.590	7.468F-04	.0109	8.9915E-04	.0132	1.0013E-03	.0147	.7000	.908
96	549	1.547	.279	3.535E-04	.0052	4.2561E-04	.0062	4.7398E-04	.0069	.7000	0
97	598	44.020	8.385	1.131E-02	.1657	1.3799E-02	.2022	1.5507E-02	.2273	.7500	-0
98	599	49.391	8.860	1.197E-02	.1754	1.4613E-02	.2142	1.6427E-02	.2408	.8000	-0

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AEDC(AHO•INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
31	7	WAH-DWO	8.00	857.2	1343	29.86	12.14	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FR (R= .009FT)	SIER (R= .009FT)	SWITCH POSITION
97.3	.0MM	3.934	3867	7.572E-05	7.833E-08	3.74E 06	6.830E-02	2.931E-02	2

TC NO	TW	DTWCT	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF	X/L	Y/YMAX
										FUSELAGE	
99	586	41.534	M.491	1.123E-02	.1644	1.365JE-02	.1999	1.5305E-02	.2241	.8000	-.223
100	586	44.752	8.729	1.154F-02	.1690	1.4035E-02	.2055	1.5733E-02	.2303	.8000	-.446
101	588	43.108	9.134	1.210E-02	.1771	1.4719E-02	.2154	1.6500E-02	.2416	.8000	-.669
102	593	44.911	9.539	1.272E-02	.1862	1.5475E-02	.2268	1.7391E-02	.2546	.8000	-.806
103	587	36.605	7.346	9.723E-03	.1424	1.1824E-02	.1731	1.3257E-02	.1941	.8500	-0
104	587	33.461	6.162	8.158E-03	.1194	9.9218E-03	.1453	1.1124E-02	.1629	.9000	-0
105	579	29.796	5.956	7.800E-03	.1142	9.4638E-03	.1386	1.0594E-02	.1551	.9000	-.226
106	572	27.160	5.410	7.018E-03	.1027	8.4978E-03	.1244	9.4495E-03	.1391	.9000	-.452
107	585	35.957	6.604	8.727E-03	.1278	1.0600E-02	.1553	1.1889E-02	.1741	.9000	-.678
108	581	34.248	6.473	8.903F-03	.1245	1.0324E-02	.1511	1.1561E-02	.1693	.9000	-.817
109	553	.860	.134	1.695E-04	.0025	2.0421E-04	.0030	2.2751E-04	.0033	.9000	1.000
110	555	1.130	.205	2.595F-04	.0038	3.1283E-04	.0046	3.4862E-04	.0051	.9000	.884
111	555	.881	.112	1.422E-04	.0021	1.7145E-04	.0025	1.9108E-04	.0028	.9000	.610
112	587	29.693	5.792	7.662F-03	.1122	9.3161E-03	.1364	1.0444E-02	.1529	.9500	-0
114	585	37.184	7.247	9.562E-03	.1400	1.1620E-02	.1701	1.3022E-02	.1906	.9900	-0
115	587	34.980	7.020	9.293E-03	.1360	1.1301E-02	.1655	1.2670E-02	.1855	.9900	-.253
116	589	33.729	6.778	8.994E-03	.1317	1.0949E-02	.1602	1.2276E-02	.1797	.9900	-.507
117	586	32.961	6.612	8.738F-03	.1279	1.0623E-02	.1555	1.1908E-02	.1743	.9900	-.660
118	586	31.464	5.786	7.651E-03	.1120	9.3024E-03	.1362	1.0428E-02	.1527	.9900	-.793
119	553	2.188	.432	5.464E-04	.0080	6.5833E-04	.0096	7.3343E-04	.0107	.9900	.780
120	548	1.533	.176	2.212E-04	.0032	2.6618E-04	.0039	2.9629E-04	.0043	.9900	.305
										LOWER WING SURFACE	
										X/C	Y/S
121	605	61.407	12.080	1.637E-02	.2396	2.0010E-02	.2929	2.2513E-02	.3296	0	.050
122	619	70.545	12.368	1.708E-02	.2501	2.0973E-02	.3071	2.3667E-02	.3465	0	.100
124	598	56.430	10.435	1.402E-02	.2052	1.7100E-02	.2503	1.9213E-02	.2813	.2000	.100
126	583	37.348	6.441	8.478E-03	.1241	1.0298E-02	.1508	1.1536E-02	.1689	.6000	.100
127	582	37.506	6.682	9.045E-03	.1326	1.0982E-02	.1608	1.2300E-02	.1801	.7000	.100
128	590	44.277	8.180	8.214E-03	.1203	9.9988E-03	.1464	1.1217E-02	.1642	.9000	.100
134	611	76.604	15.980	2.185E-02	.3200	2.6770E-02	.3919	3.0162E-02	.4416	0	.150
135	610	80.282	14.926	2.037F-02	.2982	2.4937E-02	.3651	2.8087E-02	.4112	0	.250
136	618	80.082	14.943	2.063E-02	.3020	2.5319E-02	.3707	2.8568E-02	.4183	.1000	.250
137	610	68.171	11.907	1.629F-02	.2379	1.9900E-02	.2913	2.2415E-02	.3282	.2000	.250
138	600	55.448	10.573	1.423F-02	.2084	1.7379E-02	.2544	1.9930E-02	.2959	.4000	.250
140	587	42.166	7.522	9.960E-03	.1458	1.2114E-02	.1774	1.3583E-02	.1989	.6000	.250
142	573	35.605	5.914	7.883E-03	.1125	9.6068E-03	.1361	1.0406E-02	.1524	.9000	.250
147	611	69.354	13.294	1.818F-02	.2662	2.2268E-02	.3260	2.5040E-02	.3673	0	.450
148	620	80.453	15.023	2.078F-02	.3042	2.5520E-02	.3736	2.8805E-02	.4217	.1000	.450
149	616	77.319	14.449	2.043F-02	.2990	2.5053E-02	.3668	2.8254E-02	.4136	0	.500
150	618	82.099	15.710	2.305F-02	.3375	2.8296E-02	.4143	3.1925E-02	.4674	.1000	.500
151	602	64.354	11.815	1.865F-02	.2731	2.2784E-02	.3336	2.5621E-02	.3751	.2000	.500
152	591	54.814	9.797	1.384E-02	.1908	1.5870E-02	.2323	1.7806E-02	.2607	.4000	.500
154	583	43.860	8.054	1.061F-02	.1553	1.2883E-02	.1886	1.4433E-02	.2113	.6000	.500
156	578	36.203	5.827	7.620F-03	.1116	9.2426E-03	.1353	1.0344E-02	.1514	.8000	.500
157	565	29.437	5.357	6.891F-03	.1009	8.3300E-03	.1220	9.3008E-03	.1362	.9000	.500
163	606	79.529	15.209	2.065E-02	.3024	2.5260E-02	.3698	2.8430E-02	.4162	0	.550
164	616	88.057	16.913	2.327E-02	.3407	2.8545E-02	.4179	3.2143E-02	.4713	.1000	.550
165	613	72.157	13.839	1.896E-02	.2776	2.3234E-02	.3402	2.6185E-02	.3834	0	.600
166	618	86.251	16.091	2.219E-02	.3249	2.7238E-02	.3988	3.0730E-02	.4499	.1000	.600
167	606	74.746	13.868	1.881E-02	.2755	2.3009E-02	.3368	2.5888E-02	.3790	0	.650
168	609	78.282	15.871	2.163E-02	.3167	2.6477E-02	.3876	2.9817E-02	.4365	.1000	.650
169	598	66.711	12.334	1.656E-02	.2424	2.0195E-02	.2957	2.2689E-02	.3322	0	.700
170	576	46.039	8.426	1.100E-02	.1610	1.3333E-02	.1952	1.4918E-02	.2184	.1000	.700
171	612	72.292	13.456	1.843E-02	.2698	2.2580E-02	.3306	2.5447E-02	.3726	0	.750
172	616	79.335	14.340	1.973E-02	.2888	2.4198E-02	.3543	2.7289E-02	.3995	.1000	.750
173	592	60.070	11.412	1.520E-02	.2226	1.8517E-02	.2711	2.0780E-02	.3042	.2000	.750
175	579	44.213	9.084	1.190E-02	.1742	1.4434E-02	.2113	1.6157E-02	.2366	.4000	.750
176	552	10.777	2.066	2.613E-03	.0383	3.1479E-03	.0461	3.5065E-03	.0513	.7000	.750
178	570	33.188	6.055	7.839E-03	.1148	9.4889E-03	.1389	1.0605E-02	.1553	.8000	.750
183	576	31.062	4.477	5.838F-03	.0855	7.0776E-03	.1036	7.9179E-03	.1159	0	.900
184	581	43.349	7.952	1.044E-02	.1529	1.2681E-02	.1857	1.4201E-02	.2079	.2000	.900
185	577	38.401	7.030	9.181E-03	.1344	1.1134E-02	.1630	1.2458E-02	.1824	.6000	.900
186	566	31.611	5.756	7.413E-03	.1085	8.9629E-03	.1312	1.0009E-02	.1465	.8000	.900
										UPPER WING SURFACE	
										X/C	Y/S
129	547	1.501	.230	2.885F-04	.0042	3.4709E-04	.0051	3.8830E-04	.0057	.1000	.100
130	548	.601	.102	1.282E-04	.0019	1.5420E-04	.0023	1.7165E-04	.0025	.2000	.100
131	549	.364	.068	8.529E-05	.0012	1.0266E-04	.0015	1.1430E-04	.0017	.4000	.100
132	549	.167	.032	4.020E-05	.0006	4.8377E-05	.0007	5.3856E-05	.0008	.7000	.100
133	543	.808	.141	1.758F-04	.0026	2.1128E-04	.0031	2.3498E-04	.0034	.9000	.100
143	545	2.577	.520	6.527F-04	.0096	7.8492E-04	.0115	8.7335E-04	.0128	.1000	.250
145	545	.408	.069	8.656E-05	.0013	1.0409E-04	.0015	1.1581E-04	.0017	.4000	.250
146	542	.632	.145	1.810F-04	.0027	2.1747E-04	.0032	2.4182E-04	.0035	.9000	.250
158	543	3.048	.465	5.809E-04	.0085	6.9803E-04	.0102	7.7629E-04	.0114	.1000	.500
159	543	1.824	.299	3.735E-04	.0055	4.4880E-04	.0066	4.9916E-04	.0073	.2000	.500
160	543	.660	.108	1.350E-04	.0020	1.6229E-04	.0024	1.8051E-04	.0026	.4000	.500
161	541	.539	.093	1.162E-04	.0017	1.3960E-04	.0020	1.5521E-04	.0023	.8000	.500
162	539	1.948	.265	3.294E-04	.0048	3.9549E-04	.0058	4.3955E-04	.0064	.9000	.500
179	542	4.504	.810	1.012E-03	.0148	1.2159E-03	.0178	1.3522E-03	.0198	.1000	.750
180	541	1.854	.333	4.154E-04	.0061	4.9891E-04	.0073	5.5469E-04	.0081	.2000	.750
181	540	.379	.047	5.899E-05	.0009	7.0836E-05	.0010	7.8739E-05	.0012	.4000	.750
182	537	.812	.137	1.699E-04	.0025	2.0385E-04	.0030	2.2650E-04	.0033	.8000	.750
										VERTICAL STABILIZER	
										A/C	Z/S
187	553	3.763	.619	7.830E-04	.0115	9.4330E-04	.0138	1.0509E-03	.0154	0	.100
188	545	1.696	.296	3.716E-04	.0054	4.4682E-04	.0065	4.9716E-04	.0073	.1000	.100
189	541	.335	.057	7.054E-05	.0010	8.4727E-05	.0012	9.4200E-05	.0014	.4000	.100
191	539	.705	.134	1.470E-04	.0024	2.0051E-04	.0029	2.2285E-04	.0033	.8000	.100
192	548	3.172	.607	7.641E-04	.0112	9.1955E-04	.0135	1.0237E-03	.0150	0	.250
193	543	2.146	.374	4.684E-04	.0069	5.6291E-04	.0082	6.2610E-04	.0092	.1000	.250
194	540	.588	.099	1.235E-04	.0018	1.4829E-04	.0022	1.6485E-04	.0024	.4000	.250
195	538	.720	.125	1.604E-04	.0023	1.9255E-04	.0028	2.1397E-04	.0031	.8000	.250
197	542	3.055	.566	7.062E-04	.0103	8.4835E-04	.0124	9.4331E-04	.0138	.1000	.500
198	539	.869	.160	1.986E-04	.0029	2.3845E-04	.0035	2.6504E-04	.0039	.4000	.500
200	536	1.046	.187	2.323E-04	.0034	2.7874E-04	.0041	3.0965E-04	.0045	.8000	.500
201	546	5.877	1.123	1.410E-03	.0207	1.6965E-03	.0248	1.8880E-03	.0276	0	.750
202	541	5.849	.669	8.343E-04	.0122	1.0022E-03	.0147	1.1143E-03	.0163	.1000	.750
203	536	1.245	.242	1.760E-04	.0026	2.1108E-04	.0031	2.3449E-04	.0034	.4000	.750
204	535	1.835	.219	2.712E-04	.0040	3.2523E-04	.0048	3.6123E-04	.0053	.8000	.750

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AEDC(AHO•INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
90 INCH HYPERSONIC TUNNEL A
V1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
32	7	NAM-UNO	8.00	856.9	1341	29.95	12.05	-42.00	180.00	.9

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF ($LUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FR (M= .009FT)	SIDR (M= .009FT)	SWITCH POSITION
97.2	.088	3.932	3866	7.978E-05	7.824E-08	3.74E 06	6.828E-02	2.929E-02	1

TC NO	TM	DTMLT	W-DOT	M(TO)	M(TO)/MMEF	M(.9TO)	M(.9TO)/MMEF	M(.85TO)	M(.85TO)/MMEF	FUSELAGE X/L	FUSELAGE Y/YMAX
1	622	205.439	38.394	5.338E-02	.7818	6.5608E-02	.9609	7.4098E-02	1.0852	0	0
2	589	149.160	24.966	3.819E-02	.4861	4.0389E-02	.5915	4.5303E-02	.6635	.0100	-0
3	571	96.506	15.483	2.012E-02	.2947	2.4365E-02	.3568	2.7239E-02	.3989	.0100	-.441
4	547	74.054	3.680	4.635E-03	.0679	5.5778E-03	.0817	6.2089E-03	.0909	.0100	-1.000
5	539	1.784	.597	7.444E-04	.0109	8.9383E-04	.0131	9.9358E-04	.0146	.0100	0
6	583	112.989	19.490	2.572E-02	.3766	3.1245E-02	.4576	3.5006E-02	.5127	.0200	-0
7	578	99.061	18.147	2.380E-02	.3485	2.8873E-02	.4229	3.2321E-02	.4734	.0300	-0
8	569	85.677	15.152	1.963E-02	.2876	2.3764E-02	.3480	2.6657E-02	.3884	.0300	-.303
9	545	21.588	3.416	4.292E-03	.0629	5.1620E-03	.0756	5.7439E-03	.0841	.0300	-1.000
10	540	4.649	.835	1.042E-03	.0153	1.2521E-03	.0183	1.3921E-03	.0204	.0300	0
11	571	87.099	17.348	2.254E-02	.3301	2.7290E-02	.3997	3.0508E-02	.4468	.0400	-0
12	564	80.697	12.042	1.569E-02	.2269	1.8721E-02	.2742	2.0900E-02	.3061	.0500	-0
13	562	57.877	11.471	1.472E-02	.2156	1.7783E-02	.2605	1.9846E-02	.2907	.0500	-.310
14	548	21.001	3.673	4.631E-03	.0678	5.5734E-03	.0816	6.2047E-03	.0909	.0500	-1.000
15	542	6.446	1.335	1.670E-03	.0245	2.0064E-03	.0294	2.2314E-03	.0327	.0500	0
16	565	61.088	7.746	9.974E-03	.1461	1.2057E-02	.1766	1.3462E-02	.1972	.0800	-0
17	556	39.338	6.695	8.531E-03	.1249	1.0290E-02	.1507	1.1472E-02	.1680	.0800	-.380
18	549	13.466	2.242	2.880E-03	.0422	3.4669E-03	.0508	3.8601E-03	.0565	.0800	-1.000
19	555	30.013	5.597	7.110E-03	.1042	8.5811E-03	.1257	9.5643E-03	.1401	.1000	-0
20	542	43.334	3.340	4.287E-03	.0628	5.1788E-03	.0758	5.7747E-03	.0846	.1000	-.383
21	558	34.771	5.732	7.323E-03	.1073	8.8368E-03	.1294	9.8555E-03	.1443	.1000	-.817
22	546	8.554	1.541	1.937E-03	.0284	2.3301E-03	.0341	2.5930E-03	.0380	.1000	-1.000
23	543	1.356	.244	3.056E-04	.0045	3.6730E-04	.0054	4.0859E-04	.0060	.1000	.783
24	546	6.017	1.150	1.446E-03	.0212	1.7391E-03	.0255	1.9353E-03	.0283	.1000	0
25	554	26.434	5.364	6.818E-03	.0999	8.2190E-03	.1204	9.1602E-03	.1342	.1500	-.893
26	544	8.287	1.627	2.040E-03	.0299	2.4525E-03	.0359	2.7283E-03	.0400	.1500	-1.000
27	541	.933	.178	2.222E-04	.0033	2.6692E-04	.0039	2.9679E-04	.0043	.1500	.604
28	546	7.239	1.148	1.441E-03	.0211	1.7333E-03	.0254	1.9289E-03	.0283	.1500	0
29	554	25.333	4.585	5.828E-03	.0854	7.0262E-03	.1029	7.8309E-03	.1147	.2000	-0
30	556	29.856	5.898	7.510E-03	.1100	9.0562E-03	.1326	1.0096E-02	.1479	.2000	-.278
31	556	33.426	6.972	8.883E-03	.1301	1.0713E-02	.1569	1.1944E-02	.1749	.2000	-.466
32	552	24.814	4.892	6.197E-03	.0908	7.4644E-03	.1093	8.3151E-03	.1218	.2000	-.792
33	546	9.661	1.740	2.188E-03	.0320	2.6320E-03	.0385	2.9290E-03	.0429	.2000	-1.000
34	540	.661	.128	1.578E-04	.0023	1.8950E-04	.0028	2.1069E-04	.0031	.2000	.888
35	543	6.443	1.159	1.452E-03	.0213	1.7448E-03	.0256	1.9408E-03	.0284	.2000	0
36	549	20.579	3.375	4.260E-03	.0624	5.1273E-03	.0751	5.7087E-03	.0836	.2100	0
37	549	15.174	2.737	3.454E-03	.0506	4.1576E-03	.0609	4.6291E-03	.0678	.2200	0
38	547	9.655	1.529	1.925E-03	.0282	2.3159E-03	.0339	2.5776E-03	.0378	.2300	0
39	542	4.598	.902	1.128E-03	.0165	1.3554E-03	.0199	1.5074E-03	.0221	.2400	.486
40	542	3.586	.566	7.080E-04	.0104	8.5086E-04	.0125	9.4631E-04	.0139	.2500	0
41	541	1.318	.266	3.322E-04	.0049	3.9918E-04	.0058	4.4390E-04	.0065	.2700	.465
42	542	1.464	.295	3.691E-04	.0054	4.4344E-04	.0065	4.9314E-04	.0072	.2700	.465
43	542	1.672	.255	3.194E-04	.0047	3.8380E-04	.0056	4.2686E-04	.0063	.2700	0
44	561	18.661	3.288	4.213E-03	.0617	5.0875E-03	.0745	5.6767E-03	.0831	.3000	-0
45	562	20.157	3.774	4.847E-03	.0710	5.8551E-03	.0858	6.5350E-03	.0957	.3000	-.312
46	566	28.736	6.026	7.778E-03	.1139	9.4060E-03	.1378	1.0506E-02	.1539	.3000	-.504
47	562	21.533	3.201	4.107E-03	.0601	4.9602E-03	.0726	5.5354E-03	.0811	.3000	-.857
48	552	11.097	1.884	2.388E-03	.0350	2.8766E-03	.0421	3.2046E-03	.0469	.3000	-1.000
49	544	3.051	.599	7.513E-04	.0110	9.0323E-04	.0132	1.0048E-03	.0147	.3000	.983
50	543	1.447	.284	3.556E-04	.0052	4.2743E-04	.0063	4.7543E-04	.0070	.3000	.853
51	542	.880	.182	2.281E-04	.0033	2.7413E-04	.0040	3.0488E-04	.0045	.3000	.433
52	542	.751	.155	1.945E-04	.0028	2.3379E-04	.0034	2.6002E-04	.0038	.3000	.361
53	542	1.118	.189	2.363E-04	.0035	2.8397E-04	.0042	3.1582E-04	.0046	.3000	0
54	562	15.382	3.049	3.915E-03	.0573	4.7089E-03	.0693	5.2378E-03	.0773	.4000	-0
55	562	17.827	3.534	4.537E-03	.0665	5.4808E-03	.0801	6.1169E-03	.0896	.4000	-.321
56	566	23.402	4.648	5.998E-03	.0879	7.2537E-03	.1062	8.1014E-03	.1187	.4000	-.526
57	566	24.501	4.326	5.580E-03	.0817	6.7480E-03	.0988	7.5363E-03	.1104	.4000	-.951
58	555	14.586	2.641	3.362E-03	.0492	4.0536E-03	.0594	4.5186E-03	.0662	.4000	-1.000
59	548	6.267	1.198	1.511E-03	.0221	1.8191E-03	.0266	2.0252E-03	.0297	.4000	1.000
60	544	2.579	.464	5.821E-04	.0085	6.9979E-04	.0102	7.7849E-04	.0114	.4000	.906
61	542	.749	.139	1.686E-04	.0025	2.0257E-04	.0030	2.2530E-04	.0033	.4000	.750
62	542	1.512	.239	2.992E-04	.0044	3.5959E-04	.0053	3.9995E-04	.0059	.4000	0
63	554	14.777	2.674	3.398E-03	.0498	4.0967E-03	.0600	4.5657E-03	.0669	.4500	-1.000
64	547	6.059	1.225	1.543E-03	.0226	1.8560E-03	.0272	2.0660E-03	.0303	.4500	1.000
65	543	2.466	.457	5.728E-04	.0084	6.8853E-04	.0101	7.6588E-04	.0112	.4500	.990
66	566	14.712	2.760	3.561E-03	.0522	4.3068E-03	.0631	4.8101E-03	.0704	.5000	-0
67	567	15.273	2.951	3.814E-03	.0559	4.6132E-03	.0676	5.1533E-03	.0755	.5000	-.277
68	568	19.009	3.778	4.885E-03	.0715	5.9097E-03	.0866	6.6020E-03	.0967	.5000	-.553
69	573	27.005	5.084	6.622E-03	.0970	8.0240E-03	.1175	8.9736E-03	.1314	.5000	-.830
70	569	25.828	4.995	6.471E-03	.0948	7.8309E-03	.1147	8.7508E-03	.1282	.5000	-1.000
72	548	5.986	1.211	1.527E-03	.0224	1.8380E-03	.0269	2.0462E-03	.0300	.5000	1.000
73	543	1.882	.345	4.326E-04	.0063	5.1997E-04	.0076	5.7839E-04	.0085	.5000	.886
74	542	.600	.108	1.348E-04	.0020	1.6200E-04	.0024	1.8016E-04	.0026	.5000	.640
75	543	1.724	.310	3.885E-04	.0057	4.6698E-04	.0068	5.1943E-04	.0076	.5000	0
76	570	14.823	2.458	3.187E-03	.0467	3.8578E-03	.0565	4.3115E-03	.0631	.5500	-0
77	545	2.867	.454	5.698E-04	.0083	6.8518E-04	.0100	7.6240E-04	.0112	.5500	-1.000
78	547	5.069	.775	9.760E-04	.0143	1.1742E-03	.0172	1.3069E-03	.0191	.5500	1.000
79	543	1.886	.348	4.366E-04	.0063	5.2472E-04	.0077	5.8366E-04	.0085	.5500	.935
80	568	13.833	2.674	3.458E-03	.0507	4.1841E-03	.0613	4.6746E-03	.0685	.6000	-0
81	567	13.407	2.812	3.633E-03	.0532	4.3939E-03	.0644	4.9082E-03	.0719	.6000	-.249
83	575	22.348	4.459	5.824E-03	.0853	7.0606E-03	.1034	7.8943E-03	.1157	.6000	-.748
84	535	.474	.095	1.179E-04	.0017	1.4147E-04	.0021	1.5714E-04	.0023	.6000	-1.000
85	548	4.790	.864	1.089E-03	.0159	1.3105E-03	.0192	1.4589E-03	.0214	.6000	1.000
86	545	1.605	.307	3.849E-04	.0056	4.6279E-04	.0068	5.1492E-04	.0075	.6000	.907
87	544	1.582	.276	3.465E-04	.0051	4.1659E-04	.0061	4.6346E-04	.0068	.6000	0
88	571	11.744	2.143	2.782E-03	.0407	3.3682E-03	.0493	3.7649E-03	.0551	.6500	-0
89	573	11.392	2.144	2.791E-03	.0409	3.3806E-03	.0495	3.7802E-03	.0554	.7000	-0
90	573	11.186	2.230	2.903E-03	.0425	3.5167E-03	.0515	3.9326E-03	.0576	.7000	-.235
91	572	11.897	2.370	3.081F-03	.0451	3.7311E-03	.0546	4.1715E-03	.0611	.7000	-.469
92	577	14.343	2.705	3.539E-03	.0518	4.2919E-03	.0629	4.8029E-03	.0703	.7000	-.704
93	576	14.055	2.883	3.767E-03	.0552	4.5672E-03	.0669	5.1108E-03	.0748	.7000	-.848
94	549	1.108	.242	3.060E-04	.0045	3.6837E-04	.0054	4.1016E-04	.0060	.7000	1.000
95	548	3.158	.570	7.182E-04	.0105	8.6433E-04	.0127	9.6223E-04	.0141	.7000	.908
96	547	1.345	.242	3.052E-04	.0045	3.6727E-04	.0054	4.0880E-04	.0060	.7000	0
97	576	9.967	1.879	2.457E-03	.0360	2.9787E-03	.0436	3.3330E-03	.0488	.7500	-0
98	577	11.600	2.059	2.694E-03	.0395	3.2670E-03	.0478	3.6560E-03	.0535	.8000	-0

GROUP
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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL A
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
32	7	KAR-UNO	8.00	855.5	1140	29.96	12.04	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (IN .009FT)	SIFR (IN .009FT)	SWITCH POSITION
97.1	.0148	3.926	5863	7.870E-05	7.819E-08	3.762 06	6.021E-02	2.930E-02	2

TC NO	TW	D1MC1	Q-D01	H(TO)	H(TO)/HREF	H1.91O)	H1.81O)/HREF	H1.85(O)	H1.95(O)/HREF
									FUSELAGE
									X/L Y/YMAX
99	564	11.050	2.132	2.747E-03	.0403	3.3209E-03	.0487	3.7079E-03	.0544	.8000 -.223
100	564	11.257	2.172	2.798E-03	.0410	3.3821E-03	.0496	3.7762E-03	.0554	.8000 -.446
101	568	11.441	2.401	3.107E-03	.0456	3.7594E-03	.0551	4.2002E-03	.0616	.8000 -.669
102	570	12.269	2.578	3.348E-03	.0491	4.0560E-03	.0595	4.5315E-03	.0664	.8000 -.806
103	566	8.418	1.672	2.161E-03	.0317	2.6134E-03	.0383	2.9142E-03	.0428	.8500 -0
104	566	7.508	1.367	1.764E-03	.0259	2.1331E-03	.0313	2.3823E-03	.0349	.9000 -0
105	562	8.958	1.776	2.283E-03	.0335	2.7587E-03	.0406	3.0792E-03	.0451	.9000 -.226
106	560	9.449	1.880	2.408E-03	.0353	2.9078E-03	.0426	3.2440E-03	.0476	.9000 -.452
107	567	9.508	1.732	2.240E-03	.0328	2.7094E-03	.0397	3.0267E-03	.0444	.9000 -.678
108	566	8.393	1.574	2.034E-03	.0298	2.4596E-03	.0361	2.7472E-03	.0403	.9000 -.817
109	548	.510	.103	1.301E-04	.0019	1.5655E-04	.0023	1.7430E-04	.0026	.9000 1.000
110	549	1.537	.276	3.492E-04	.0051	4.2034E-04	.0062	4.6805E-04	.0069	.9000 .884
111	548	.721	.119	1.496E-04	.0022	1.8009E-04	.0026	2.0049E-04	.0029	.9000 .610
112	568	7.317	1.414	1.830E-03	.0268	2.2138E-03	.0325	2.4733E-03	.0363	.9500 -0
114	566	10.492	2.026	2.618E-03	.0384	3.1668E-03	.0464	3.5373E-03	.0519	.9900 -0
115	570	9.791	1.948	2.529E-03	.0371	3.0610E-03	.0449	3.4211E-03	.0502	.9900 -.253
116	570	9.244	1.840	2.388E-03	.0350	2.8908E-03	.0424	3.2311E-03	.0474	.9900 -.507
117	567	8.434	1.676	2.169E-03	.0318	2.6238E-03	.0385	2.9313E-03	.0430	.9900 -.660
118	567	6.883	1.294	1.673E-03	.0238	1.9634E-03	.0288	2.1935E-03	.0322	.9900 -.793
119	548	1.881	.366	4.620E-04	.0068	5.5606E-04	.0082	6.1907E-04	.0091	.9900 .780
120	542	.772	.088	1.108E-04	.0016	1.3312E-04	.0020	1.4807E-04	.0022	.9900 .305
									LOWER WING SURFACE
									X/C Y/S
121	581	32.614	6.346	8.364E-03	.1226	1.0159E-02	.1489	1.1379E-02	.1668	0 .050
122	598	43.743	7.597	1.023E-02	.1500	1.2486E-02	.1830	1.4032E-02	.2057	0 .100
124	575	17.311	3.166	4.136F-03	.0606	5.0138E-03	.0735	5.6092E-03	.0822	.2000 .100
126	566	7.277	1.245	1.608E-03	.0236	1.9441E-03	.0285	2.1714E-03	.0318	.6000 .100
127	566	8.076	1.470	1.899E-03	.0278	2.2961E-03	.0337	2.5644E-03	.0376	.7000 .100
128	567	11.150	1.539	1.940E-03	.0292	2.4073E-03	.0353	2.6892E-03	.0394	.9000 .100
134	598	56.308	11.672	1.572E-02	.2304	1.9182E-02	.2812	2.1555E-02	.3160	0 .150
135	595	54.886	10.133	1.359E-02	.1992	1.6569E-02	.2429	1.8608E-02	.2728	0 .250
136	590	36.427	6.712	8.951E-03	.1312	1.0899E-02	.1598	1.2230E-02	.1793	.1000 .250
137	581	23.517	4.051	5.334F-03	.0782	6.4770E-03	.0949	7.2541E-03	.1063	.2000 .250
138	573	15.120	2.846	3.710E-03	.0544	4.4953E-03	.0659	5.0274E-03	.0737	.4000 .250
140	571	11.448	2.026	2.633E-03	.0386	3.1886E-03	.0467	3.5645E-03	.0523	.6000 .250
142	565	12.393	2.050	2.642E-03	.0387	3.1942E-03	.0468	3.5667E-03	.0523	.9000 .250
147	599	50.871	9.648	1.309E-02	.1919	1.5981E-02	.2343	1.7965E-02	.2634	0 .450
148	594	39.485	7.288	9.769E-03	.1432	1.1908E-02	.1746	1.3372E-02	.1960	.1000 .450
149	602	52.847	10.087	1.367E-02	.2003	1.6699E-02	.2448	1.8783E-02	.2753	0 .500
150	593	38.812	7.812	1.046E-02	.1533	1.2746E-02	.1868	1.4310E-02	.2098	.1000 .500
151	579	25.844	5.167	6.792E-03	.0996	8.2448E-03	.1209	9.2319E-03	.1353	.2000 .500
152	577	20.563	3.650	4.782F-03	.0701	5.8001E-03	.0850	6.4912E-03	.0952	.4000 .500
154	572	13.803	2.521	3.284E-03	.0481	3.9780E-03	.0583	4.4484E-03	.0652	.6000 .500
156	568	10.162	1.628	2.109E-03	.0309	2.5523E-03	.0374	2.8519E-03	.0418	.8000 .500
157	560	8.512	1.545	1.979E-03	.0290	2.3895E-03	.0350	2.6654E-03	.0391	.9000 .500
163	594	54.094	10.285	1.378E-02	.2019	1.6789E-02	.2461	1.8851E-02	.2764	0 .550
164	594	42.723	8.125	1.089E-02	.1597	1.3277E-02	.1946	1.4910E-02	.2186	.1000 .550
165	601	49.356	9.417	1.274E-02	.1868	1.5563E-02	.2281	1.7501E-02	.2566	0 .600
166	598	43.875	8.114	1.043E-02	.1603	1.3344E-02	.1956	1.4996E-02	.2198	.1000 .600
167	596	49.585	9.160	1.231E-02	.1804	1.5009E-02	.2200	1.6861E-02	.2472	0 .650
168	593	40.717	8.195	1.097E-02	.1608	1.3371E-02	.1960	1.5013E-02	.2201	.1000 .650
169	593	48.969	9.032	1.208E-02	.1771	1.4722E-02	.2158	1.6528E-02	.2423	0 .700
170	572	26.889	4.909	6.387E-03	.0936	7.7365E-03	.1134	8.6499E-03	.1268	.1000 .700
171	604	52.805	9.792	1.331E-02	.1951	1.6269E-02	.2385	1.8307E-02	.2684	0 .750
172	601	46.671	8.379	1.133E-02	.1661	1.3837E-02	.2028	1.5558E-02	.2281	.1000 .750
173	582	30.296	5.729	7.59RE-03	.1108	9.1814E-03	.1346	1.0286E-02	.1508	.2000 .750
175	573	21.143	4.332	5.648E-03	.0828	6.8437E-03	.1003	7.6540E-03	.1122	.4000 .750
176	553	4.133	.793	1.007E-03	.0148	1.2143E-03	.0178	1.3532E-03	.0198	.7000 .750
178	564	10.940	1.989	2.561E-03	.0375	3.0956E-03	.0454	3.4559E-03	.0507	.8000 .750
183	577	23.419	3.378	4.424E-03	.0649	5.3663E-03	.0787	6.0057E-03	.0880	0 .900
184	577	23.423	4.287	5.616E-03	.0823	6.8112E-03	.0998	7.6227E-03	.1117	.2000 .900
185	570	14.977	2.733	3.549E-03	.0520	4.2970E-03	.0630	4.8031E-03	.0704	.6000 .900
186	562	11.292	2.052	2.639E-03	.0386	3.1839E-03	.0467	3.5529E-03	.0521	.8000 .900
									UPPER WING SURFACE
									X/C Y/S
129	545	1.364	.208	2.621E-04	.0038	3.1526E-04	.0046	3.5082E-04	.0051	.1000 .100
130	546	.483	.082	1.029E-04	.0015	1.2384E-04	.0018	1.3783E-04	.0020	.2000 .100
131	548	.565	.105	1.329E-04	.0019	1.5946E-04	.0023	1.7752E-04	.0026	.4000 .100
132	547	.145	.028	3.505F-05	.0005	4.2177E-05	.0006	4.6950E-05	.0007	.7000 .100
133	543	.460	.080	1.008E-04	.0015	1.2122E-04	.0018	1.3486E-04	.0020	.9000 .100
143	545	2.509	.507	6.374E-04	.0093	7.6658E-04	.0112	8.9307E-04	.0125	.1000 .250
145	547	.359	.061	7.665E-05	.0011	9.2226E-05	.0014	1.0266E-04	.0015	.4000 .250
146	543	.667	.116	1.461E-04	.0021	1.7566E-04	.0026	1.9542E-04	.0029	.9000 .250
158	546	2.667	.468	5.134E-04	.0075	6.1760E-04	.0091	6.8736E-04	.0101	.1000 .500
159	547	1.643	.269	3.393E-04	.0050	4.0828E-04	.0060	4.5446E-04	.0067	.2000 .500
160	548	.662	.109	1.370E-04	.0020	1.6485E-04	.0024	1.8364E-04	.0027	.4000 .500
161	545	.385	.067	8.447E-05	.0012	1.0160E-04	.0015	1.1306E-04	.0017	.8000 .500
162	542	1.494	.204	2.551E-04	.0037	3.0657E-04	.0045	3.4099E-04	.0050	.9000 .500
179	548	3.937	.710	8.966E-04	.0131	1.0793E-03	.0158	1.2016E-03	.0176	.1000 .750
180	547	1.838	.331	4.179E-04	.0061	5.0288E-04	.0074	5.5980E-04	.0082	.2000 .750
181	546	.494	.062	7.814E-05	.0011	9.4017E-05	.0014	1.0465E-04	.0015	.4000 .750
182	542	.623	.105	1.319E-04	.0019	1.5848E-04	.0023	1.7628E-04	.0026	.8000 .750
									VERTICAL STABILIZER
									X/C Z/S
187	548	3.760	.620	7.824E-04	.0115	9.4164E-04	.0138	1.0484E-03	.0154	0 .100
188	540	1.659	.296	3.701E-04	.0054	4.4464E-04	.0065	4.9441E-04	.0072	.1000 .100
189	537	.332	.056	6.968E-05	.0010	8.3637E-05	.0012	9.2946E-05	.0014	.4000 .100
191	536	.450	.086	1.063E-04	.0016	1.2749E-04	.0019	1.4164E-04	.0021	.8000 .100
192	544	3.446	.658	8.265E-04	.0121	9.9386E-04	.0146	1.1058E-03	.0162	0 .250
193	539	2.044	.356	4.443E-04	.0065	5.3364E-04	.0078	5.9324E-04	.0087	.1000 .250
194	537	.506	.085	1.060E-04	.0016	1.2716E-04	.0019	1.4130E-04	.0021	.4000 .250
195	535	.570	.102	1.266E-04	.0019	1.5190E-04	.0022	1.6874E-04	.0025	.8000 .250
197	539	3.510	.649	8.100E-04	.0119	9.7271E-04	.0143	1.0813E-03	.0159	.1000 .500
198	536	.797	.143	1.776E-04	.0026	2.1309E-04	.0031	2.3676E-04	.0035	.4000 .500
200	534	.879	.157	1.951E-04	.0029	2.3399E-04	.0034	2.5989E-04	.0038	.8000 .500
201	546	7.285	1.392	1.752E-03	.0257	2.1077E-03	.0309	2.3457E-03	.0344	0 .750
202	540	6.594	.753	9.412E-04	.0138	1.1305E-03	.0166	1.2568E-03	.0184	.1000 .750
203	536	1.087	.124	1.536E-04	.0023	1.8429E-04	.0027	2.0478E-04	.0030	.4000 .750
204	533	1.489	.178	2.202E-04	.0032	2.6400E-04	.0039	2.9320E-04	.0043	.8000 .750

GROUP
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AEDC(AMO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL A
V1102

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
33	7	NAR-DW0	8.00	857.0	1342	39.99	2.01	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	XREF-FR (R= .009FT)	SIFR (R= .009FT)	SWITCH POSITION
97.2	.088	3.935	3865	7.580E-05	7.827E-08	3.24E 06	6.830E-02	2.929E-02	1

TC NO	TW	DTWCT	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF	FUSELAGE X/L	FUSELAGE Y/YMAX
1	614	146.043	34.645	4.759E-02	.6967	5.8340E-02	.8541	6.5769E-02	.9629	0	0
2	596	161.154	27.069	3.632E-02	.5318	4.4296E-02	.6485	4.9758E-02	.7285	.0100	-0
3	582	115.074	18.558	2.443E-02	.3577	2.9675E-02	.4345	3.3240E-02	.4867	.0100	-.441
4	552	24.127	3.699	4.693E-03	.0686	5.6409E-03	.0826	6.2836E-03	.0920	.0100	-1.000
5	544	5.376	.850	1.067F-03	.0156	1.2829E-03	.0188	1.4268E-03	.0209	.0100	0
6	594	129.407	22.438	3.002E-02	.4395	3.6584E-02	.5356	4.1077E-02	.6014	.0200	-0
7	585	119.961	22.046	2.914F-02	.4266	3.5417E-02	.5185	3.9695E-02	.5812	.0300	-0
8	582	105.288	18.737	2.467F-02	.3612	2.9968E-02	.4388	3.3570E-02	.4915	.0300	-.303
9	550	21.115	3.350	4.233F-03	.0620	5.0964E-03	.0746	5.6754E-03	.0831	.0300	-1.000
10	546	5.767	1.043	1.310F-03	.0192	1.5796E-03	.0231	1.7533E-03	.0257	.0300	0
11	585	107.883	21.628	2.898E-02	.4185	3.4742E-02	.5087	3.8938E-02	.5701	.0400	-0
12	577	78.140	15.608	2.043E-02	.2990	2.4475E-02	.3627	2.7177E-02	.4059	.0500	-0
13	574	71.718	14.303	1.864F-02	.2729	2.2591E-02	.3308	2.5268E-02	.3700	.0500	-.310
14	554	21.018	3.793	4.817E-03	.0705	5.8066E-03	.0850	6.4711E-03	.0947	.0500	-1.000
15	547	4.181	1.277	1.607F-03	.0235	1.9317E-03	.0283	2.1923E-03	.0315	.0500	0
16	579	81.441	10.487	1.364E-02	.1998	1.6556E-02	.2424	1.8534E-02	.2714	.0800	-0
17	571	51.740	8.872	1.151F-02	.1686	1.3962E-02	.2041	1.5585E-02	.2282	.0800	-.360
18	556	13.619	2.317	2.950E-03	.0432	3.5582E-03	.0521	3.9668E-03	.0581	.0800	-1.000
19	570	41.119	7.729	1.002F-02	.1467	1.2128E-02	.1776	1.3555E-02	.1985	.1000	-0
20	578	57.022	4.431	5.804E-03	.0850	7.0418E-03	.1031	7.8820E-03	.1154	.1000	-.383
21	575	44.572	7.412	9.672E-03	.1416	1.1725E-02	.1717	1.3117E-02	.1920	.1000	-.817
22	557	8.523	1.545	1.969F-03	.0288	2.3757E-03	.0348	2.6490E-03	.0388	.1000	-1.000
23	554	.857	.155	1.967E-04	.0029	2.3709E-04	.0035	2.6420E-04	.0039	.1000	.783
24	555	6.124	1.176	1.496E-03	.0219	1.8034E-03	.0264	2.0102E-03	.0294	.1000	0
25	567	32.286	6.594	8.513E-03	.1246	1.0296E-02	.1507	1.1500E-02	.1684	.1500	-.893
26	553	8.610	1.699	2.155E-03	.0316	2.5973E-03	.0380	2.8941E-03	.0424	.1500	-1.000
27	549	.875	.167	2.113E-04	.0031	2.5436E-04	.0037	2.8321E-04	.0041	.1500	.664
28	552	6.386	1.014	1.285E-03	.0188	1.5485E-03	.0227	1.7252E-03	.0253	.1500	0
29	568	34.869	6.354	8.212E-03	.1202	9.9342E-03	.1454	1.1098E-02	.1625	.2000	-0
30	568	40.330	8.019	1.037E-02	.1518	1.2543E-02	.1836	1.4014E-02	.2052	.2000	-.278
31	567	40.761	8.551	1.104E-02	.1617	1.3355E-02	.1955	1.4918E-02	.2184	.2000	-.466
32	561	30.185	5.981	7.664E-03	.1122	9.2950E-03	.1359	1.0327E-02	.1512	.2000	-.792
33	552	10.155	1.836	2.325F-03	.0340	2.8009E-03	.0410	3.1203E-03	.0457	.2000	-1.000
34	543	.776	.147	1.839E-04	.0027	2.2100E-04	.0032	2.4579E-04	.0036	.2000	.888
35	545	3.179	.572	7.182E-04	.0105	8.6394E-04	.0126	9.6077E-04	.0141	.2000	0
36	547	8.203	1.344	1.691F-03	.0248	2.0341E-03	.0298	2.2634E-03	.0331	.2100	0
37	546	6.478	1.167	1.467E-03	.0215	1.7643E-03	.0258	1.9633E-03	.0287	.2200	0
38	544	4.453	.704	8.834E-04	.0129	1.0620E-03	.0155	1.1815E-03	.0173	.2300	0
39	542	3.602	.707	8.841F-04	.0129	1.0624E-03	.0156	1.1816E-03	.0173	.2400	.486
40	541	1.857	.293	3.665E-04	.0054	4.4031E-04	.0064	4.8962E-04	.0072	.2500	0
41	540	.955	.192	2.401E-04	.0035	2.8835E-04	.0042	3.2058E-04	.0047	.2700	.465
42	540	.973	.196	2.446E-04	.0036	2.9383E-04	.0043	3.2669E-04	.0048	.2700	.469
43	541	.951	.145	1.812F-04	.0027	2.1763E-04	.0032	2.4199E-04	.0035	.2700	0
44	573	27.415	4.858	6.325E-03	.0926	7.6633E-03	.1122	8.5701E-03	.1255	.3000	-0
45	575	33.347	6.292	8.203F-03	.1201	9.9426E-03	.1456	1.1122E-02	.1628	.3000	-.312
46	577	36.216	7.635	9.989F-03	.1462	1.2116E-02	.1774	1.3559E-02	.1985	.3000	-.504
47	567	25.585	3.813	4.922E-03	.0721	5.9528E-03	.0872	6.6492E-03	.0973	.3000	-.857
48	554	12.350	2.099	2.664E-03	.0390	3.2104E-03	.0470	3.5780E-03	.0524	.3000	-1.000
49	543	2.984	.586	7.332E-04	.0107	8.8013E-04	.0129	9.8027E-04	.0144	.3000	.983
50	542	1.147	.225	2.812E-04	.0041	3.3792E-04	.0049	3.7578E-04	.0055	.3000	.853
51	540	.573	.119	1.479F-04	.0022	1.7768E-04	.0026	1.9755E-04	.0029	.3000	.433
52	541	.688	.142	1.777E-04	.0026	2.1349E-04	.0031	2.3737E-04	.0035	.3000	.361
53	541	.856	.144	1.803F-04	.0026	2.1658E-04	.0032	2.4080E-04	.0035	.3000	0
54	566	22.174	4.404	5.676E-03	.0831	6.8620E-03	.1005	7.6630E-03	.1122	.4000	-0
55	567	24.082	4.748	6.174E-03	.0904	7.4664E-03	.1093	8.3394E-03	.1221	.4000	-.321
56	571	32.639	6.497	8.427E-03	.1234	1.0202E-02	.1494	1.1403E-02	.1669	.4000	-.526
57	562	27.565	4.857	6.231F-03	.0912	7.5265E-03	.1102	8.3996E-03	.1230	.4000	-.951
58	549	15.466	2.795	3.528E-03	.0516	4.2468E-03	.0622	4.7288E-03	.0692	.4000	-1.000
59	541	6.819	1.300	1.623E-03	.0238	1.9502E-03	.0286	2.1685E-03	.0317	.4000	1.000
60	537	2.025	.363	4.508E-04	.0066	5.4101E-04	.0079	6.0111E-04	.0088	.4000	.906
61	535	.670	.120	1.490E-04	.0022	1.7875E-04	.0026	1.9858E-04	.0029	.4000	.750
62	537	1.555	.245	3.043F-04	.0045	3.6512E-04	.0053	4.0568E-04	.0059	.4000	0
63	542	14.837	2.667	3.334E-03	.0488	4.0052E-03	.0586	4.4539E-03	.0652	.4500	-1.000
64	537	6.071	1.220	1.517E-03	.0222	1.8200E-03	.0266	2.0223E-03	.0296	.4500	1.000
65	533	1.998	.368	4.555E-04	.0067	5.4609E-04	.0080	6.0641E-04	.0089	.4500	.990
66	566	21.210	3.979	5.132E-03	.0751	6.2064E-03	.0909	6.9316E-03	.1015	.5000	-0
67	567	22.568	4.361	5.633E-03	.0825	6.8136E-03	.0998	7.6114E-03	.1114	.5000	-.277
68	569	25.698	5.111	6.613E-03	.0968	8.0015E-03	.1171	8.9404E-03	.1309	.5000	-.553
69	574	34.093	6.421	8.364E-03	.1225	1.0136E-02	.1484	1.1336E-02	.1660	.5000	-.830
70	563	28.100	5.417	6.955E-03	.1018	8.4024E-03	.1230	9.3782E-03	.1373	.5000	-1.000
72	537	5.816	1.169	1.453E-03	.0213	1.7441E-03	.0255	1.9380E-03	.0284	.5000	1.000
73	533	1.641	.303	3.742E-04	.0055	4.4865E-04	.0066	4.9820E-04	.0073	.5000	.886
74	532	.415	.074	9.157F-05	.0013	1.0976E-04	.0016	1.2186E-04	.0018	.5000	.640
75	533	1.714	.307	3.793E-04	.0056	4.5475E-04	.0067	5.0498E-04	.0074	.5000	0
76	571	21.850	3.625	4.703E-03	.0689	5.6937E-03	.0834	6.3642E-03	.0932	.5500	-0
77	534	2.632	.414	5.127E-04	.0075	6.1482E-04	.0090	6.8283E-04	.0100	.5500	-1.000
78	537	4.772	.726	9.029E-04	.0132	1.0832E-03	.0159	1.2036E-03	.0176	.5500	1.000
79	534	1.847	.341	4.216E-04	.0062	5.0561E-04	.0074	5.6152E-04	.0082	.5500	.935
80	584	37.188	7.246	9.568E-03	.1401	1.1628E-02	.1702	1.3031E-02	.1908	.6000	-0
81	570	22.407	4.706	6.098E-03	.0893	7.3803E-03	.1081	8.2478E-03	.1208	.6000	-.249
83	579	28.573	5.711	7.484E-03	.1096	9.0811E-03	.1330	1.0165E-02	.1488	.6000	-.748
84	531	.659	.132	1.627E-04	.0024	1.9494E-04	.0029	2.1641E-04	.0032	.6000	-1.000
85	539	6.851	1.230	1.532E-03	.0224	1.8396E-03	.0269	2.0448E-03	.0299	.6000	1.000
86	535	1.853	.352	4.366E-04	.0064	5.2377E-04	.0077	5.8185E-04	.0085	.6000	.907
87	534	1.557	.270	3.347E-04	.0049	4.0131E-04	.0059	4.4590E-04	.0065	.6000	0
88	596	72.823	13.495	1.809E-02	.2643	2.2015E-02	.3223	2.4730E-02	.3621	.6500	-0
89	598	70.734	13.477	1.813E-02	.2654	2.2123E-02	.3239	2.4860E-02	.3640	.7000	-0
90	599	94.109	10.921	1.471E-02	.2154	1.7958E-02	.2629	2.0194E-02	.2955	.7000	-.235
91	581	28.948	5.712	7.508E-03	.1099	9.1156E-03	.1335	1.0208E-02	.1495	.7000	-.469
92	602	59.570	11.372	1.538E-02	.2252	1.8796E-02	.2752	2.1140E-02	.3095	.7000	-.704
93	579	23.401	4.808	6.303E-03	.0923	7.6483E-03	.1120	8.5620E-03	.1254	.7000	-.848
94	538	.309	.067	8.353E-05	.0012	1.0028E-04	.0015	1.1145E-04	.0016	.7000	1.000
95	541	2.934	.527	6.586E-04	.0096	7.9121E-04	.0116	8.7976E-04	.0129	.7000	.908
96	539	1.304	.234	2.915E-04	.0043	3.5004E-04	.0051	3.8908E-04	.0057	.7000	0
97	605	61.947	11.841	1.608E-02	.2355	1.9666E-02	.2879	2.2132E-02	.3240	.7500	-0
98	604	63.602	11.435	1.550E-02	.2270	1.8967E-02	.2774	2.1316E-02	.3121	.8000	-0

GROUP
97

NOT REPRODUCIBLE

AEDC(AHO•INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL A
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
33	7	NAW-UNO	8.00	855.8	1343	19.97	2.03	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FR (M= .009FT)	SIER (M= .009FT)	SWITCH POSITION
97.3	.084	3.927	3867	7.556E-05	7.836E-08	3.73E 06	6.025E-02	2.934E-02	2

TC NO	TM	DTHDT	Q-DOT	M(TO)	M(TO)/MREF	M(.9TO)	M(.9TO)/MREF	M(.8STO)	M(.8STO)/MREF
99	597	59.697	11.704	1.569E-02	.2499	1.9139E-02	.2806	2.1500E-02	.3150
100	594	44.214	8.694	1.155E-02	.1692	1.4071E-02	.2062	1.5796E-02	.2314
101	580	18.087	3.818	5.002E-03	.0733	6.0702E-03	.0889	6.7958E-03	.0996
102	582	17.390	3.675	4.826E-03	.0707	5.8826E-03	.0899	6.5661E-03	.0962
103	598	50.231	10.132	1.359E-02	.1991	1.6579E-02	.2429	1.8626E-02	.2729
104	603	46.102	8.544	1.194E-02	.1691	1.4097E-02	.2065	1.5854E-02	.2323
105	590	42.666	8.573	1.138E-02	.1667	1.3842E-02	.2028	1.5526E-02	.2275
106	579	40.954	8.186	1.071E-02	.1569	1.2990E-02	.1903	1.4540E-02	.2130
107	596	39.806	6.614	8.849E-03	.1296	1.0787E-02	.1580	1.2114E-02	.1775
108	587	16.923	3.207	4.242E-03	.0621	5.1577E-03	.0756	5.7821E-03	.0847
109	549	1.185	.240	3.022E-04	.0044	3.6371E-04	.0053	4.0495E-04	.0059
110	547	.903	.161	2.046E-04	.0030	2.4609E-04	.0036	2.7389E-04	.0040
111	547	.706	.110	1.452E-04	.0021	1.7459E-04	.0026	1.9429E-04	.0028
112	606	43.790	8.611	1.169E-02	.1706	1.4232E-02	.2085	1.6009E-02	.2346
114	588	48.113	9.393	1.244E-02	.1823	1.5138E-02	.2218	1.6975E-02	.2487
115	610	51.628	10.473	1.429E-02	.2094	1.7496E-02	.2563	1.9707E-02	.2887
116	612	50.521	10.258	1.404E-02	.2057	1.7202E-02	.2520	1.9385E-02	.2840
117	609	47.953	9.703	1.314E-02	.1925	1.6064E-02	.2354	1.8074E-02	.2648
118	605	41.883	7.770	1.053E-02	.1542	1.2869E-02	.1885	1.4480E-02	.2121
119	550	3.632	.715	9.022E-04	.0132	1.0862E-03	.0159	1.2095E-03	.0177
120	542	1.953	.223	2.789E-04	.0041	3.3514E-04	.0049	3.726HE-04	.0055

FUSELAGE

A/L	Y/YMAX
.8000	-.223
.8000	-.446
.8000	-.669
.8000	-.806
.8500	-0
.9000	-0
.9000	-.226
.9000	-.452
.9000	-.678
.9000	-.817
.9000	1.000
.9000	.884
.9000	.610
.9500	-0
.9900	-0
.9900	-.253
.9900	-.507
.9900	-.660
.9900	-.793
.9900	.780
.9900	.305

TC NO	TM	DTHDT	Q-DOT	M(TO)	M(TO)/MREF	M(.9TO)	M(.9TO)/MREF	M(.8STO)	M(.8STO)/MREF
121	581	25.692	4.997	6.553E-03	.0960	7.9541E-03	.1169	8.9061E-03	.1305
122	595	32.306	5.603	7.486E-03	.1097	9.1232E-03	.1337	1.0243E-02	.1501
124	585	19.407	3.566	4.705E-03	.0689	5.7183E-03	.0838	6.4085E-03	.0939
126	581	9.720	1.675	2.196E-03	.0322	2.6654E-03	.0391	2.9844E-03	.0437
127	582	16.715	3.067	4.028E-03	.0590	4.8903E-03	.0717	5.4768E-03	.0802
128	616	64.282	9.079	1.249E-02	.1830	1.5319E-02	.2246	1.7277E-02	.2531
134	589	45.392	9.369	1.242E-02	.1819	1.5104E-02	.2213	1.6938E-02	.2482
135	589	45.387	8.356	1.108E-02	.1623	1.3479E-02	.1975	1.5117E-02	.2215
136	602	39.500	7.317	9.872E-03	.1446	1.2056E-02	.1766	1.3556E-02	.1986
137	593	24.749	4.289	5.720E-03	.0838	6.9674E-03	.1021	7.8206E-03	.1146
138	584	19.547	3.700	4.874E-03	.0714	5.9213E-03	.0868	6.6345E-03	.0972
140	586	13.972	2.691	3.587F-03	.0482	3.9959E-03	.0585	4.4785E-03	.0656
142	580	13.777	2.297	3.011E-03	.0441	3.6955E-03	.0536	4.0924E-03	.0600
147	595	43.394	8.255	1.103E-02	.1616	1.3446E-02	.1970	1.5098E-02	.2212
148	606	40.258	7.471	1.013E-02	.1485	1.2389E-02	.1815	1.3942E-02	.2043
149	600	49.504	9.442	1.271E-02	.1862	1.5517E-02	.2273	1.7442E-02	.2555
150	603	40.968	8.285	1.120E-02	.1641	1.3683E-02	.2005	1.5391E-02	.2255
151	591	29.775	5.988	7.965E-03	.1167	9.6972E-03	.1421	1.0881E-02	.1594
152	590	25.050	4.475	5.943E-03	.0871	7.2335E-03	.1060	8.1143E-03	.1189
154	585	18.456	3.392	4.473E-03	.0655	5.4365E-03	.0797	6.0922E-03	.0893
156	583	14.306	2.308	3.035E-03	.0445	3.6860E-03	.0540	4.1288E-03	.0605
157	572	11.465	2.094	2.715E-03	.0398	3.2876E-03	.0482	3.6752E-03	.0538
163	593	47.224	8.976	1.196E-02	.1753	1.4571E-02	.2135	1.6354E-02	.2396
164	603	44.063	8.416	1.138E-02	.1667	1.3900E-02	.2037	1.5634E-02	.2291
165	598	44.958	8.566	1.150E-02	.1685	1.4028E-02	.2055	1.5781E-02	.2309
166	607	44.277	8.222	1.117E-02	.1637	1.3667E-02	.2002	1.5384E-02	.2254
167	595	46.099	8.511	1.137E-02	.1666	1.3856E-02	.2030	1.5557E-02	.2279
168	601	41.133	8.308	1.119E-02	.1640	1.3665E-02	.2002	1.5362E-02	.2251
169	587	43.514	8.006	1.059E-02	.1552	1.2885E-02	.1888	1.4466E-02	.2117
170	574	28.369	5.184	6.736E-03	.0987	8.1602E-03	.1196	9.1247E-03	.1337
171	599	46.422	8.588	1.154E-02	.1691	1.4084E-02	.2064	1.5828E-02	.2319
172	609	46.141	8.315	1.122E-02	.1699	1.3858E-02	.2030	1.5604E-02	.2286
173	592	35.718	6.787	9.041E-03	.1325	1.1011E-02	.1613	1.2358E-02	.1811
175	585	27.142	5.592	7.373E-03	.1080	8.9601E-03	.1313	1.0041E-02	.1471
176	556	6.215	1.194	1.516E-03	.0222	1.8276E-03	.0268	2.0371E-03	.0298
178	576	15.600	2.854	3.720E-03	.0545	4.5095E-03	.0661	5.0447E-03	.0739
183	574	20.180	2.906	3.779E-03	.0554	4.5785E-03	.0671	5.1203E-03	.0750
184	585	23.063	4.239	5.594E-03	.0820	6.7990E-03	.0996	7.6198E-03	.1116
185	583	15.891	2.917	3.835E-03	.0562	4.6569E-03	.0682	5.2162E-03	.0764
186	572	11.807	2.156	2.794E-03	.0409	3.3832E-03	.0496	3.7818E-03	.0554

LOWER WING SURFACE

A/C	Y/S
0	.050
0	.100
.2000	.100
.6000	.100
.7000	.100
.9000	.100
0	.150
0	.250
.1000	.250
.2000	.250
.4000	.250
.6000	.250
.9000	.250
0	.450
.1000	.450
0	.500
.1000	.500
.2000	.500
.4000	.500
.6000	.500
.8000	.500
.9000	.500
0	.550
.1000	.550
0	.600
.1000	.600
0	.650
.1000	.650
0	.700
.1000	.700
0	.750
.1000	.750
.2000	.750
.4000	.750
.7000	.750
.8000	.750
0	.900
.2000	.900
.6000	.900
.8000	.900

TC NO	TM	DTHDT	Q-DOT	M(TO)	M(TO)/MREF	M(.9TO)	M(.9TO)/MREF	M(.8STO)	M(.8STO)/MREF
129	541	.702	.107	1.336E-04	.0020	1.6047E-04	.0024	1.7842E-04	.0026
130	542	.092	.016	1.936E-05	.0003	2.3261E-05	.0003	2.5866E-05	.0004
131	545	.153	.028	3.552E-05	.0005	4.2716E-05	.0006	4.7527E-05	.0007
132	547	.459	.088	1.104E-04	.0016	1.3285E-04	.0019	1.4787E-04	.0022
133	545	1.035	.181	2.264E-04	.0033	2.7212E-04	.0040	3.0273E-04	.0044
143	541	1.246	.251	3.132E-04	.0046	3.7626E-04	.0055	4.1835E-04	.0061
145	545	.273	.046	5.787E-05	.0008	6.9570E-05	.0010	7.7395E-05	.0011
146	544	.989	.173	2.159E-04	.0032	2.5954E-04	.0038	2.8869E-04	.0042
158	542	1.682	.257	3.202E-04	.0047	3.8471E-04	.0056	4.2779E-04	.0063
159	543	.863	.141	1.766E-04	.0026	2.1223E-04	.0031	2.3605E-04	.0035
160	545	.618	.101	1.268E-04	.0019	1.5252E-04	.0022	1.6969E-04	.0025
161	544	.680	.119	1.484E-04	.0022	1.7842E-04	.0026	1.9846E-04	.0029
162	542	1.981	.267	3.332E-04	.0049	4.0023E-04	.0059	4.4502E-04	.0065
179	541	.200	.036	4.482E-05	.0007	5.3836E-05	.0008	5.9860E-05	.0009
180	542	.200	.036	4.486E-05	.0007	5.3903E-05	.0008	5.9943E-05	.0009
181	544	.180	.023	2.821E-05	.0004	3.3908E-05	.0005	3.7715E-05	.0006
182	540	.685	.116	1.439E-04	.0021	1.7279E-04	.0025	1.9208E-04	.0028

UPPER WING SURFACE

A/C	Y/S
.1000	.100
.2000	.100
.4000	.100
.7000	.100
.9000	.100
.1000	.250
.4000	.250
.9000	.250
.1000	.500
.2000	.500
.4000	.500
.8000	.500
.9000	.500
.1000	.750
.2000	.750
.4000	.750
.8000	.750

TC NO	TM	DTHDT	Q-DOT	M(TO)	M(TO)/MREF	M(.9TO)	M(.9TO)/MREF	M(.8STO)	M(.8STO)/MREF
187	542	2.064	.337	4.212E-04	.0062	5.0008E-04	.0074	5.6278E-04	.0082
188	537	1.161	.202	2.503E-04	.0037	3.0032E-04	.0044	3.3365E-04	.0049
189	535	.461	.078	9.598E-05	.0014	1.1512E-04	.0017	1.2787E-04	.0019
191	533	.606	.115	1.420E-04	.0021	1.7022E-04	.0025	1.8900E-04	.0028
192	541	2.279	.434	5.411E-04	.0079	6.4979E-04	.0095	7.2238E-04	.0106
193	536	1.945	.338	4.190E-04	.0061	5.0271E-04	.0074	5.5848E-04	.0082
194	534	.863	.145	1.792E-04	.0026	2.1484E-04	.0031	2.3856E-04	.0035
195	533	.893	.152	1.881E-04	.0028	2.2548E-04	.0033	2.5034E-04	.0037
197	536	3.340	.617	7.638E-04	.0112	9.1623E-04	.0134	1.0178E-03	.0149
198	534	1.365	.244	3.023E-04	.0044	3.6252E-04	.0053	4.0261E-04	.0059
200	532	2.106	.377	4.647E-04	.0068	5.5696E-04	.0082	6.1836E-04	.0091
201	540	4.509	.859	1.070E-03	.0157	1.2852E-03	.0188	1.4288E-03	.0209
202	536	4.844	.553	6.850E-04	.0100	8.2178E-04	.0120	9.1296E-04	.0134
203	533	1.998	.228	2.809E-04	.0041	3.3670E-04	.0049	3.7386E-04	.0055
204	535	4.873	.582	7.194E-04	.0105	8.6264E-04	.0126	9.5806E-04	.0140

VERTICAL STABILIZER

A/C	Z/S
0	.100
.1000	.100
.4000	.100
.8000	.100
0	.250
.1000	.250
.4000	.250
.8000	.250
.1000	.500
.4000	.500
.8000	.500
0	.750
.1000	.750
.4000	.750
.8000	.750

GROUP
97

5/29/71

AEDC(AHO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL A
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
34	7	NAH-UHO	8.00	858.0	1346	49.97	-7.97	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF ($LUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (AE .009FT)	SIER (AE .009FT)	SWITCH POSITION
97.5	.088	3.941	3871	7.869E-05	7.851E-08	3.73E 06	6.839E-02	2.932E-02	1

TC NO	TW	DIWDT	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF	FUSELAGE X/L	FUSELAGE Y/YMAX
1	586	175.325	32.239	4.245E-02	.6206	5.1586E-02	.7542	5.7810E-02	.8452	0	0
2	593	169.286	28.397	3.775E-02	.5520	4.5976E-02	.6722	5.1597E-02	.7544	.0100	-0
3	583	130.919	21.122	2.769E-02	.4049	3.4622E-02	.4916	3.7655E-02	.5505	.0100	-.441
4	550	22.080	3.383	4.251E-03	.0622	5.1167E-03	.0748	5.6964E-03	.0833	.0100	-1.000
5	544	5.076	.803	1.002E-03	.0146	1.2039E-03	.0176	1.3389E-03	.0196	.0100	0
6	595	142.954	24.801	3.305E-02	.4832	4.0272E-02	.5888	4.5212E-02	.6610	.0200	-0
7	593	134.719	24.857	3.304E-02	.4831	4.0236E-02	.5883	4.5153E-02	.6602	.0300	-0
8	578	175.071	22.213	2.893E-02	.4230	3.5081E-02	.5129	3.9292E-02	.5739	.0300	-.303
9	548	20.039	3.176	3.978E-03	.0582	4.7851E-03	.0700	5.3250E-03	.0779	.0300	-1.000
10	545	5.419	.976	1.219E-03	.0178	1.4694E-03	.0214	1.6301E-03	.0238	.0300	0
11	581	178.419	25.701	3.362E-02	.4916	4.0809E-02	.5967	4.5690E-02	.6680	.0400	-0
12	580	93.704	14.740	1.947E-02	.3578	2.9468E-02	.4340	3.3227E-02	.4858	.0500	-0
13	576	84.604	10.886	2.193E-02	.3207	2.6577E-02	.3886	2.9725E-02	.4346	.0500	-.310
14	552	20.951	3.673	4.629E-03	.0677	5.5752E-03	.0815	6.2093E-03	.0908	.0500	-1.000
15	546	5.537	1.148	1.436E-03	.0210	1.7269E-03	.0252	1.9209E-03	.0281	.0500	0
16	580	102.400	13.083	1.708F-02	.2498	2.0723E-02	.3030	2.3194E-02	.3391	.0800	-0
17	571	63.219	10.839	1.400E-02	.2046	1.6938E-02	.2477	1.8929E-02	.2768	.0800	-.360
18	555	14.611	2.485	3.144E-03	.0460	3.7894E-03	.0554	4.2226E-03	.0617	.0800	-1.000
19	573	53.069	9.988	1.292E-02	.1889	1.5645E-02	.2287	1.7488E-02	.2557	.1000	-0
20	581	68.494	9.338	8.972E-03	.1019	8.4610E-03	.1237	9.4728E-03	.1385	.1000	-.383
21	575	53.157	8.837	1.147E-02	.1677	1.3892E-02	.2031	1.5536E-02	.2271	.1000	-.817
22	554	9.389	1.699	2.145E-03	.0314	2.5836E-03	.0378	2.8781E-03	.0421	.1000	-1.000
23	550	.532	.096	1.208E-04	.0018	1.4543E-04	.0021	1.6192E-04	.0024	.1000	.783
24	552	5.856	1.123	1.415E-03	.0207	1.7045E-03	.0249	1.8984E-03	.0278	.1000	0
25	565	37.795	7.711	9.875E-03	.1444	1.1931E-02	.1744	1.3317E-02	.1947	.1500	-.893
26	550	9.500	1.871	2.352E-03	.0344	2.8311E-03	.0414	3.1520E-03	.0461	.1500	-1.000
27	547	.831	.159	1.989E-04	.0029	2.3914E-04	.0035	2.6608E-04	.0039	.1500	.604
28	549	3.414	.541	6.796E-04	.0099	8.1775E-04	.0120	9.1026E-04	.0133	.1500	0
29	568	44.026	8.024	1.032E-02	.1509	1.2481E-02	.1825	1.3940E-02	.2038	.2000	-0
30	569	50.707	10.084	1.298E-02	.1897	1.5695E-02	.2295	1.7531E-02	.2563	.2000	-.278
31	567	50.209	10.532	1.353E-02	.1978	1.6353E-02	.2391	1.8261E-02	.2670	.2000	-.466
32	560	35.280	6.986	8.893F-03	.1300	1.0731E-02	.1569	1.1968E-02	.1750	.2000	-.792
33	550	11.112	2.006	2.520E-03	.0368	3.0323E-03	.0443	3.3756E-03	.0494	.2000	-1.000
34	542	.648	.124	1.538E-04	.0022	1.8472E-04	.0027	2.0538E-04	.0030	.2000	.888
35	543	2.748	.494	6.158E-04	.0090	7.3975E-04	.0108	8.2258E-04	.0120	.2000	0
36	544	3.743	.612	7.637E-04	.0112	9.1768E-04	.0134	1.0206E-03	.0149	.2100	0
37	543	4.614	.831	1.035E-03	.0151	1.2435E-03	.0182	1.3828E-03	.0202	.2200	0
38	542	3.739	.591	7.354E-04	.0108	8.8343E-04	.0129	9.8224E-04	.0144	.2300	0
39	540	2.279	.447	5.547E-04	.0081	6.6596E-04	.0097	7.4022E-04	.0108	.2400	.446
40	540	1.600	.293	3.137E-04	.0046	3.7660E-04	.0055	4.1859E-04	.0061	.2500	0
41	539	.741	.149	1.850E-04	.0027	2.2202E-04	.0032	2.4673E-04	.0036	.2700	.465
42	540	.748	.151	1.869E-04	.0027	2.2431E-04	.0033	2.4929E-04	.0036	.2700	.465
43	540	1.027	.157	1.944E-04	.0028	2.3334E-04	.0034	2.5934E-04	.0038	.2700	0
44	580	33.862	6.020	7.862E-03	.1149	9.5380E-03	.1395	1.0676E-02	.1561	.3000	-0
45	582	38.182	7.218	9.449E-03	.1382	1.1469E-02	.1677	1.2842E-02	.1878	.3000	-.312
46	584	43.978	9.304	1.222E-02	.1786	1.4841E-02	.2170	1.6626E-02	.2431	.3000	-.504
47	569	28.696	4.282	5.515E-03	.0806	6.6709E-03	.0975	7.4521E-03	.1090	.3000	-.857
48	553	13.386	2.274	2.870F-03	.0420	3.4571E-03	.0505	3.8510E-03	.0563	.3000	-1.000
49	541	2.553	.500	6.222E-04	.0091	7.4715E-04	.0109	8.3059E-04	.0121	.3000	.983
50	540	1.150	.225	2.797E-04	.0041	3.3584E-04	.0049	3.7328E-04	.0055	.3000	.853
51	539	.400	.083	1.026E-04	.0015	1.2314E-04	.0018	1.3684E-04	.0020	.3000	.433
52	539	.570	.118	1.461E-04	.0021	1.7534E-04	.0026	1.9486E-04	.0028	.3000	.361
53	540	.986	.166	2.064E-04	.0030	2.4781E-04	.0036	2.7542E-04	.0040	.3000	0
54	574	27.278	5.439	7.044E-03	.1030	8.5305E-03	.1247	9.5370E-03	.1394	.4000	-0
55	576	31.471	6.281	8.157E-03	.1193	9.8846E-03	.1445	1.1055E-02	.1616	.4000	-.321
56	580	39.018	7.805	1.020E-02	.1491	1.2376E-02	.1810	1.3855E-02	.2026	.4000	-.526
57	566	28.181	4.976	6.383E-03	.0933	7.7142E-03	.1128	8.6127E-03	.1259	.4000	-.951
58	549	15.602	2.816	3.534E-03	.0517	4.2527E-03	.0622	4.7338E-03	.0692	.4000	-1.000
59	542	7.116	1.357	1.689F-03	.0247	2.0282E-03	.0297	2.2550E-03	.0330	.4000	1.000
60	536	1.210	.217	2.680E-04	.0039	3.2142E-04	.0047	3.5701E-04	.0052	.4000	.906
61	536	.531	.095	1.175E-04	.0017	1.4089E-04	.0021	1.5647E-04	.0023	.4000	.750
62	537	1.943	.306	3.785E-04	.0055	4.5402E-04	.0066	5.0435E-04	.0074	.4000	0
63	546	15.195	2.737	3.420E-03	.0500	4.1120E-03	.0601	4.5744E-03	.0669	.4500	-1.000
64	538	5.906	1.188	1.470E-03	.0215	1.7640E-03	.0258	1.9598E-03	.0287	.4500	1.000
65	533	.887	.163	2.011E-04	.0029	2.4098E-04	.0035	2.6751E-04	.0039	.4500	.990
66	576	26.425	4.983	6.477E-03	.0947	7.8497E-03	.1148	8.7805E-03	.1284	.5000	-0
67	578	26.951	5.235	6.817E-03	.0997	8.2657E-03	.1209	9.2483E-03	.1352	.5000	-.277
68	579	31.149	6.228	8.126F-03	.1188	9.8568E-03	.1441	1.1032E-02	.1613	.5000	-.553
69	584	38.954	7.374	9.684E-03	.1416	1.1763E-02	.1720	1.3178E-02	.1927	.5000	-.830
70	566	28.191	5.445	6.988E-03	.1022	8.4465E-03	.1235	9.4308E-03	.1379	.5000	-1.000
72	537	5.745	1.155	1.429E-03	.0209	1.7142E-03	.0251	1.9043E-03	.0278	.5000	1.000
73	532	.935	.172	2.115E-04	.0031	2.5346E-04	.0037	2.8132E-04	.0041	.5000	.886
74	531	.254	.045	5.565E-05	.0008	6.6663E-05	.0010	7.3983E-05	.0011	.5000	.640
75	532	1.813	.289	3.546E-04	.0052	4.2484E-04	.0062	4.7157E-04	.0069	.5000	0
76	580	25.700	4.284	5.596E-03	.0818	6.7896E-03	.0993	7.6001E-03	.1111	.5500	-0
77	531	2.561	.402	4.933E-04	.0072	5.9085E-04	.0086	6.5566E-04	.0096	.5500	-1.000
78	534	4.944	.751	9.250E-04	.0135	1.1088E-03	.0162	1.2312E-03	.0180	.5500	1.000
79	530	1.449	.267	3.268E-04	.0048	3.9141E-04	.0057	4.3432E-04	.0064	.5500	.935
80	614	80.836	15.971	2.184E-02	.3193	2.6763E-02	.3913	3.0164E-02	.4410	.6000	-0
81	609	76.398	16.351	2.220E-02	.3246	2.7163E-02	.3972	3.0582E-02	.4471	.6000	-.249
83	589	37.534	7.539	9.959E-03	.1456	1.2112E-02	.1771	1.3581E-02	.1986	.6000	-.748
84	530	.190	.038	4.672E-05	.0007	5.5941E-05	.0008	6.2069E-05	.0009	.6000	-1.000
85	537	7.207	1.292	1.597E-03	.0234	1.9161E-03	.0280	2.1285E-03	.0311	.6000	1.000
86	532	1.839	.349	4.287E-04	.0063	5.1363E-04	.0075	5.7013E-04	.0083	.6000	.907
87	531	1.331	.231	2.834E-04	.0041	3.3949E-04	.0050	3.7679E-04	.0055	.6000	0
88	611	74.335	13.828	1.882E-02	.2752	2.3047E-02	.3370	2.5958E-02	.3795	.6500	-0
89	613	66.792	13.194	1.800E-02	.2632	2.2046E-02	.3223	2.4839E-02	.3632	.7000	-0
90	617	65.484	13.321	1.827E-02	.2672	2.2408E-02	.3276	2.5268E-02	.3694	.7000	-.235
91	612	66.394	13.477	1.836E-02	.2684	2.2481E-02	.3287	2.5324E-02	.3703	.7000	-.469
92	618	72.048	13.853	1.905E-02	.2785	2.3371E-02	.3417	2.6363E-02	.3855	.7000	-.704
93	616	65.379	13.662	1.871E-02	.2736	2.2938E-02	.3354	2.5859E-02	.3781	.7000	-.848
94	536	.237	.051	6.349E-05	.0009	7.6149E-05	.0011	8.4578E-05	.0012	.7000	1.000
95	539	1.649	.296	3.666E-04	.0054	4.4000E-04	.0064	4.8892E-04	.0071	.7000	.908
96	537	.480	.086	1.065E-04	.0016	1.2779E-04	.0019	1.4197E-04	.0021	.7000	0
97	622	61.106	11.767	1.626E-02	.2377	1.9972E-02	.2920	2.2547E-02	.3297	.7500	-0
98	624	63.333	11.491	1.593E-02	.2329	1.9583E-02	.2863	2.2119E-02	.3234	.8000	-0

GROUP
98

NOT REPRODUCIBLE

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
34	7	NAR-UNO	8.00	857.5	1347	49.99	-7.99	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FR (Re .009FT)	SIER (H= .009FT)	SWITCH POSITION
97.6	.088	3.935	3873	7.551E-05	7.857E-08	3.72E 06	6.039E-02	2.936E-02	2

TC NO	TW	D1W(1)	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.8STO)	H(.8STO)/HREF

FUSELAGE

A/L	Y/YMAX
.8000	-.223
.8000	-.446
.8000	-.669
.8000	-.806
.8500	-0
.9000	-0
.9000	-.226
.9000	-.452
.9000	-.678
.9000	-.817
.9000	1.000
.9000	.884
.9000	.610
.9500	-0
.9900	-0
.9900	-.253
.9900	-.507
.9900	-.660
.9900	-.793
.9900	.780
.9900	.305

99	619	60.224	11.921	1.637E-02	.2395	2.0088E-02	.2939	2.2659E-02	.3315	
100	614	57.489	11.354	1.549E-02	.2260	1.9971E-02	.2775	2.1376E-02	.3127	
101	614	56.413	12.097	1.650E-02	.2410	2.0213E-02	.2957	2.2776E-02	.3332	
102	621	57.778	12.429	1.712E-02	.2505	2.1019E-02	.3075	2.3721E-02	.3470	
103	618	53.117	10.813	1.484E-02	.2171	1.8208E-02	.2664	2.0537E-02	.3005	
104	630	54.832	10.285	1.436E-02	.2100	1.7680E-02	.2587	1.9995E-02	.2925	
105	610	46.924	9.518	1.292E-02	.1890	1.9811E-02	.2313	1.7802E-02	.2604	
106	596	43.643	8.797	1.172E-02	.1715	1.4289E-02	.2090	1.6039E-02	.2347	
107	622	53.337	9.968	1.375E-02	.2011	1.6884E-02	.2470	1.9058E-02	.2788	
108	619	50.016	9.618	1.321E-02	.1933	1.6209E-02	.2371	1.8283E-02	.2675	
109	558	1.898	.246	6.887E-04	.0071	5.8926E-04	.0086	6.9683E-04	.0096	
110	594	1.767	.316	8.990E-04	.0058	4.8074E-04	.0070	5.3558E-04	.0078	
111	993	1.598	.263	8.309E-04	.0048	3.9857E-04	.0058	4.4342E-04	.0065	
112	624	93.722	10.703	1.901E-02	.2196	1.8507E-02	.2708	2.0946E-02	.3064	
114	630	64.586	12.849	1.793E-02	.2623	2.2081E-02	.3230	2.4971E-02	.3653	
115	648	65.861	13.577	1.944E-02	.2844	2.4042E-02	.3523	2.7348E-02	.4001	
116	648	58.911	12.145	1.739E-02	.2544	2.1547E-02	.3152	2.4470E-02	.3580	
117	613	53.336	10.925	1.530E-02	.2239	1.8858E-02	.2749	2.1338E-02	.3122	
118	633	46.468	8.733	1.224E-02	.1791	1.5092E-02	.2208	1.7080E-02	.2499	
119	561	7.979	1.581	2.013E-03	.0295	2.4302E-03	.0356	2.7108E-03	.0397	
120	549	4.236	.486	6.093E-04	.0009	7.3300E-06	.0107	8.1580E-04	.0119	

LOWER WING SURFACE

A/C	Y/S
0	.050
0	.100
.2000	.100
.6000	.100
.7000	.100
.9000	.100
0	.150
0	.250
.1000	.250
.2000	.250
.4000	.250
.6000	.250
.9000	.250
0	.450
.1000	.450
0	.500
.1000	.500
.2000	.500
.4000	.500
.6000	.500
.8000	.500
.9000	.500
0	.550
.1000	.550
0	.600
.1000	.600
0	.650
.1000	.650
0	.700
.1000	.700
0	.750
.1000	.750
.2000	.750
.4000	.750
.7000	.750
.8000	.750
0	.900
.2000	.900
.6000	.900
.8000	.900

121	582	22.827	4.443	5.810E-03	.0950	7.0513E-03	.1032	7.8951E-03	.1155	
122	594	27.314	4.735	6.290E-03	.0920	7.6597E-03	.1121	8.5960E-03	.1258	
124	599	31.045	5.743	7.681E-03	.1124	9.3088E-03	.1371	1.0525E-02	.1540	
126	619	52.307	9.170	1.259E-02	.1862	1.5451E-02	.2260	1.7428E-02	.2550	
127	622	55.210	10.318	1.423E-02	.2082	1.7475E-02	.2557	1.9724E-02	.2886	
128	638	57.673	8.221	1.159E-02	.1696	1.4312E-02	.2094	1.6213E-02	.2372	
134	584	36.245	7.466	9.790E-03	.1432	1.1889E-02	.1739	1.3318E-02	.1948	
135	585	35.548	6.534	8.582E-03	.1256	1.0427E-02	.1525	1.1682E-02	.1709	
136	611	37.369	6.951	9.447E-03	.1382	1.1564E-02	.1692	1.3022E-02	.1905	
137	609	34.040	5.941	8.048E-03	.1177	9.8644E-03	.1440	1.1081E-02	.1621	
138	613	62.606	12.010	1.637E-02	.2395	2.0051E-02	.2933	2.2590E-02	.3305	
140	628	60.213	10.940	1.521E-02	.2226	1.8719E-02	.2739	2.1157E-02	.3095	
142	622	58.022	9.860	1.361E-02	.1991	1.6712E-02	.2445	1.8865E-02	.2760	
147	591	31.945	6.066	8.428E-03	.1174	9.7686E-03	.1429	1.0957E-02	.1603	
148	615	38.004	7.081	9.672E-03	.1415	1.1852E-02	.1734	1.3358E-02	.1954	
149	598	39.687	7.562	1.010E-02	.1478	1.2319E-02	.1802	1.3837E-02	.2024	
150	613	40.170	8.158	1.111E-02	.1626	1.3612E-02	.1991	1.5335E-02	.2244	
151	606	39.989	8.098	1.094E-02	.1600	1.3368E-02	.1956	1.5040E-02	.2200	
152	612	49.204	8.879	1.208F-02	.1768	1.4793E-02	.2164	1.6663E-02	.2438	
154	616	58.942	10.987	1.503E-02	.2199	1.8421E-02	.2695	2.0766E-02	.3038	
156	621	56.968	9.353	1.289E-02	.1885	1.5821E-02	.2315	1.7855E-02	.2612	
157	605	46.321	8.595	1.159E-02	.1696	1.4166E-02	.2072	1.5935E-02	.2331	
163	593	38.412	7.302	9.689E-03	.1418	1.1798E-02	.1726	1.3238E-02	.1937	
164	611	41.408	7.935	1.078E-02	.1577	1.3194E-02	.1930	1.4858E-02	.2174	
165	596	36.756	6.996	9.320E-03	.1363	1.1358E-02	.1662	1.2752E-02	.1866	
166	614	41.641	7.755	1.058E-02	.1548	1.2961E-02	.1896	1.4604E-02	.2137	
167	594	37.322	6.889	9.195E-03	.1339	1.1151E-02	.1631	1.2515E-02	.1831	
168	607	35.939	7.280	9.842E-03	.1440	1.2033E-02	.1760	1.3540E-02	.1981	
169	586	33.779	6.210	8.158E-03	.1194	9.9118E-03	.1450	1.1106E-02	.1625	
170	579	28.020	5.136	6.692E-03	.0979	8.1163E-03	.1187	9.0829E-03	.1329	
171	597	39.576	7.314	9.752E-03	.1427	1.1886E-02	.1739	1.3347E-02	.1953	
172	616	45.373	8.201	1.122E-02	.1641	1.3751E-02	.2012	1.5501E-02	.2268	
173	602	43.003	8.208	1.102E-02	.1613	1.3456E-02	.1969	1.5126E-02	.2213	
175	602	37.493	7.787	1.045E-02	.1529	1.2756E-02	.1866	1.4338E-02	.2098	
176	569	18.310	3.541	4.553F-03	.0666	5.5061E-03	.0806	6.1501E-03	.0900	
178	599	44.269	8.190	1.096E-02	.1603	1.3363E-02	.1955	1.5013E-02	.2196	
183	578	21.101	3.044	3.957E-03	.0579	4.7972E-03	.0702	5.3667E-03	.0785	
184	598	30.112	5.568	7.434E-03	.1088	9.0644E-03	.1326	1.0180E-02	.1489	
185	603	41.230	7.642	1.028E-02	.1504	1.2550E-02	.1836	1.4111E-02	.2064	
186	591	33.580	8.189	8.187E-03	.1198	9.9622E-03	.1457	1.1173E-02	.1635	

UPPER WING SURFACE

A/C	Y/S
.1000	.100
.2000	.100
.4000	.100
.7000	.100
.9000	.100
.1000	.250
.4000	.250
.9000	.250
.1000	.500
.2000	.500
.4000	.500
.8000	.500
.9000	.500
.1000	.700
.2000	.700
.4000	.700
.8000	.700
.9000	.700
.1000	.750
.2000	.750
.4000	.750
.8000	.750

129	544	.340	.052	6.466E-05	.0009	7.7698E-05	.0011	8.6408E-05	.0013	
130	546	.338	.057	7.139E-05	.0010	8.5826E-05	.0013	9.5481E-05	.0014	
131	549	.273	.051	6.355E-05	.0009	7.6465E-05	.0011	8.5112E-05	.0012	
132	554	.730	.140	1.767E-04	.0026	2.1286E-04	.0031	2.3713E-04	.0035	
133	552	1.255	.220	2.768E-04	.0040	3.3327E-04	.0049	3.7114E-04	.0054	
143	544	.512	.103	1.289E-04	.0019	1.5488E-04	.0023	1.7226E-04	.0025	
145	549	.439	.074	9.332E-05	.0014	1.1227E-04	.0016	1.2495E-04	.0018	
146	551	1.345	.236	2.961E-04	.0043	3.5634E-04	.0052	3.9673E-04	.0058	
158	547	1.729	.264	3.305E-04	.0048	3.9734E-04	.0059	4.4207E-04	.0065	
159	548	1.690	.277	3.470E-04	.0051	4.1734E-04	.0061	4.6444E-04	.0068	
160	550	1.365	.224	2.815E-04	.0041	3.3880E-04	.0050	3.7719E-04	.0055	
161	551	1.224	.214	2.692E-04	.0039	3.2407E-04	.0047	3.6081E-04	.0053	
162	548	3.362	.460	5.756E-04	.0084	6.9240E-04	.0101	7.7058E-04	.0113	
179	546	.684	.123	1.540E-04	.0023	1.8515E-04	.0027	2.0598E-04	.0030	
180	547	.723	.130	1.631E-04	.0024	1.9611E-04	.0029	2.1821E-04	.0032	
181	548	.474	.080	1.456E-05	.0011	8.9880E-05	.0013	9.9801E-05	.0015	
182	546	1.180	.196	2.453E-04	.0036	2.9496E-04	.0043	3.2815E-04	.0048	

VERTICAL STABILIZER

A/C	Z/S
0	.100
.1000	.100
.4000	.100
.8000	.100
0	.250
.1000	.250
.4000	.250
.8000	.250
.1000	.500
.4000	.500
.8000	.500
0	.750
.1000	.750
.4000	.750
.8000	.750

187	544	.867	.141	1.759E-04	.0026	2.1136E-04	.0031	2.3505E-04	.0034	
188	541	.910	.158	1.966E-04	.0029	2.3604E-04	.0035	2.6236E-04	.0038	
189	537	.345	.058	7.176E-05	.0010	8.6087E-05	.0013	9.5631E-05	.0014	
191	535	.710	.135	1.663E-04	.0024	1.9940E-04	.0029	2.2143E-04	.0032	
192	543	2.268	.433	5.383E-04	.0079	6.4665E-04	.0095	7.1900E-04	.0105	
193	539	1.844	.321	3.977E-04	.0058	4.7738E-04	.0070	5.3049E-04	.0078	
194	536	.676	.114	1.403E-04	.0021	1.6828E-04	.0025	1.8690E-04	.0027	
195	535	1.229	.220	2.711E-04	.0040	3.2505E-04	.0048	3.6093E-04	.0053	
197	538	2.955	.546	6.750E-04	.0099	8.0985E-04	.0118	8.9970E-04	.0132	
198	536	1.153	.207	2.547E-04	.0037	3.0547E-04	.0045	3.3925E-04	.0050	
200	535	1.631	.292	3.596E-04	.0053	4.3102E-04	.0063	4.7859E-04	.0070	
201	542	4.945	.943	1.171E-03	.0171	1.4063E-03	.0206	1.5633E-03	.0229	
202	538	4.677	.534	6.604E-04	.0097	7.9234E-04	.0116	8.8029E-04	.0129	
203	535	1.801	.205	2.528E-04	.0037	3.0302E-04	.0044	3.3648E-04	.0049	
204	535	2.844	.340	4.187E-04	.0061	5.0197E-04	.0073	5.5744E-04	.0082	

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
35	7	NAM-DM0	8.00	552.2	1310	49.99	-7.99	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF ($LUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .009FT)	SIFR (H= .009FT)	SWITCH POSITION
94.9	.057	2.534	5819	5.001E-05	7.640E-08	2.90E 06	5.45E-02	3.597E-02	1

TC NO	TW	DTWDT	W-DOT	M(TO)	M(TO)/MREF	M(.9TO)	M(.9TO)/MREF	M(.85TO)	M(.85TO)/MREF	FUSELAGE X/L	FUSELAGE Y/YMAX
1	578	128.847	23.598	3.225E-02	.5908	3.9281E-02	.7196	4.4086E-02	.8077	0	0
2	576	132.242	22.002	3.001F-02	.5498	3.653HE-02	.6694	4.0996E-02	.7511	.0100	-0
3	566	102.242	16.357	2.199E-02	.4029	2.6694E-02	.4891	2.9888E-02	.5476	.0100	-.441
4	537	17.524	2.665	3.448E-03	.0632	4.1518E-03	.0761	4.6234E-03	.0847	.0100	-1.000
5	531	1.434	.539	6.929E-04	.0127	8.3310E-04	.0153	9.2684E-04	.0170	.0100	0
6	576	113.752	19.555	2.667E-02	.4885	3.2462E-02	.5947	3.6422E-02	.6673	.0200	-0
7	569	107.288	19.562	2.641E-02	.4838	3.2082E-02	.5877	3.5941E-02	.6585	.0300	-0
8	566	95.948	16.937	2.277F-02	.4171	2.7635E-02	.5063	3.0940E-02	.5668	.0100	-.303
9	535	16.705	2.629	3.393F-03	.0622	4.0825E-03	.0748	4.5466E-03	.0833	.0300	-1.000
10	532	3.502	.626	8.066E-04	.0147	9.6748E-04	.0177	1.0764E-03	.0197	.0300	0
11	569	100.345	19.956	2.693F-02	.4934	3.2716E-02	.5993	3.6648E-02	.6714	.0400	-0
12	567	73.132	14.460	1.922F-02	.3521	2.3270E-02	.4263	2.6011E-02	.4765	.0500	-0
13	554	66.942	13.211	1.748E-02	.3202	2.1139E-02	.3873	2.3613E-02	.4326	.0500	-.310
14	537	16.681	2.900	3.754F-03	.0688	4.5204E-03	.0828	5.0345E-03	.0922	.0500	-1.000
15	532	4.114	.847	1.089E-03	.0200	1.3100E-03	.0240	1.4576E-03	.0267	.0500	0
16	567	80.429	10.199	1.350E-02	.2473	1.6343E-02	.2994	1.8268E-02	.3347	.0800	-0
17	549	49.704	8.428	1.108E-02	.2030	1.3384E-02	.2452	1.4937E-02	.2737	.0800	-.360
18	534	11.374	1.913	2.467F-03	.0452	2.9677E-03	.0544	3.3034E-03	.0605	.0800	-1.000
19	546	41.765	7.754	1.018E-02	.1861	1.2261E-02	.2246	1.3677E-02	.2506	.1000	-0
20	552	55.958	4.292	5.667E-03	.1038	6.851HE-03	.1255	7.6517E-03	.1402	.1000	-.383
21	550	41.964	6.887	9.065E-03	.1661	1.0953E-02	.2007	1.2226E-02	.2240	.1000	-.817
22	533	7.295	1.305	1.680E-03	.0308	2.0201E-03	.0370	2.2479E-03	.0412	.1000	-1.000
23	529	.468	.094	1.071E-04	.0020	1.2865E-04	.0024	1.4308E-04	.0026	.1000	.783
24	531	4.261	.808	1.038E-03	.0190	1.2480E-03	.0229	1.3885E-03	.0254	.1000	0
25	542	30.082	6.064	7.902E-03	.1448	9.5276E-03	.1745	1.0620E-02	.1946	.1500	-.893
26	530	7.054	1.383	1.775E-03	.0325	2.1331E-03	.0391	2.3727E-03	.0435	.1500	-1.000
27	527	.587	.111	1.418E-04	.0026	1.7028E-04	.0031	1.8930E-04	.0035	.1500	.664
28	529	3.415	.536	6.863E-04	.0126	8.2470E-04	.0151	9.1714E-04	.0168	.1500	0
29	546	34.721	6.255	8.187E-03	.1500	9.8801E-03	.1810	1.1020E-02	.2019	.2000	-0
30	547	38.850	7.639	1.001F-02	.1834	1.2087E-02	.2214	1.3464E-02	.2470	.2000	-.278
31	546	39.559	8.207	1.075F-02	.1969	1.2970E-02	.2376	1.4467E-02	.2650	.2000	-.486
32	541	27.325	5.357	6.969E-03	.1277	8.4009E-03	.1539	9.3623E-03	.1715	.2000	-.792
33	534	8.219	1.471	1.895E-03	.0347	2.2800E-03	.0418	2.5376E-03	.0465	.2000	-1.000
34	527	.614	.118	1.484E-04	.0027	1.7828E-04	.0033	1.9821E-04	.0036	.2000	.888
35	528	1.701	.303	3.881E-04	.0071	4.6619E-04	.0085	5.1832E-04	.0095	.2000	0
36	528	3.202	.519	6.650E-04	.0122	7.9892E-04	.0146	8.8839E-04	.0163	.2100	0
37	528	2.918	.521	6.666E-04	.0122	8.0087E-04	.0147	8.9056E-04	.0163	.2200	0
38	528	3.064	.480	6.149E-04	.0113	7.3879E-04	.0135	8.2150E-04	.0151	.2300	0
39	527	1.585	.308	3.943E-04	.0072	4.7357E-04	.0087	5.2649E-04	.0096	.2400	.486
40	527	1.346	.211	2.694E-04	.0049	3.2351E-04	.0059	3.5963E-04	.0066	.2500	0
41	526	.451	.090	1.149E-04	.0021	1.3800E-04	.0025	1.5338E-04	.0028	.2700	.465
42	526	.592	.118	1.511E-04	.0028	1.8147E-04	.0033	2.0171E-04	.0037	.2700	.465
43	526	.632	.096	1.221E-04	.0022	1.4662E-04	.0027	1.6297E-04	.0030	.2700	0
44	552	27.434	4.808	6.347E-03	.1163	7.6735E-03	.1406	8.5089E-03	.1570	.3000	-0
45	554	28.632	5.338	7.064E-03	.1294	8.5453E-03	.1566	9.5460E-03	.1749	.3000	-.312
46	556	34.803	7.259	9.634F-03	.1765	1.1660E-02	.2136	1.3031E-02	.2387	.3000	-.504
47	546	21.991	3.242	4.247E-03	.0778	5.1260E-03	.0939	5.7179E-03	.1048	.3000	-.857
48	534	10.512	1.768	2.281E-03	.0418	2.7449E-03	.0503	3.0555E-03	.0560	.3000	-1.000
49	526	2.122	.413	5.265E-04	.0096	6.3221E-04	.0116	7.0272E-04	.0129	.3000	.983
50	525	.853	.166	2.113E-04	.0039	2.5368E-04	.0046	2.8194E-04	.0052	.3000	.853
51	524	.235	.048	6.128E-05	.0011	7.3546E-05	.0013	8.1725E-05	.0015	.3000	.443
52	525	.282	.058	7.368E-05	.0013	8.8437E-05	.0016	9.8280E-05	.0018	.3000	.361
53	525	.662	.111	1.411E-04	.0026	1.6935E-04	.0031	1.8819E-04	.0034	.3000	0
54	548	22.381	4.404	5.783E-03	.1059	6.9842E-03	.1280	7.7934E-03	.1428	.4000	-0
55	551	24.555	4.838	6.374E-03	.1168	7.7032E-03	.1411	8.5997E-03	.1575	.4000	-.321
56	554	30.837	6.089	8.063E-03	.1477	9.7550E-03	.1787	1.0898E-02	.1997	.4000	-.526
57	545	22.139	3.866	5.058E-03	.0927	6.1035E-03	.1118	6.8071E-03	.1247	.4000	-.951
58	534	12.208	2.186	2.819E-03	.0516	3.3918E-03	.0621	3.7755E-03	.0692	.4000	-1.000
59	528	5.591	1.058	1.354E-03	.0248	1.6260E-03	.0298	1.8080E-03	.0331	.4000	1.000
60	524	1.205	.214	2.730E-04	.0050	3.2760E-04	.0060	3.6401E-04	.0067	.4000	.906
61	523	.428	.076	9.680F-05	.0018	1.1615E-04	.0021	1.2904E-04	.0024	.4000	.750
62	524	1.580	.247	3.144E-04	.0058	3.7725E-04	.0069	4.1915E-04	.0077	.4000	0
63	533	11.456	2.049	2.638E-03	.0483	3.1735E-03	.0581	3.5318E-03	.0647	.4500	-1.000
64	527	4.824	.968	1.233E-03	.0226	1.4810E-03	.0271	1.6466E-03	.0302	.4500	1.000
65	524	.888	.163	2.072E-04	.0038	2.4869E-04	.0046	2.7631E-04	.0051	.4500	.990
66	551	20.278	3.774	4.973E-03	.0911	6.0099E-03	.1101	6.7095E-03	.1229	.5000	-0
67	552	20.949	4.017	5.306F-03	.0972	6.4156E-03	.1175	7.1649E-03	.1313	.5000	-.277
68	554	25.061	4.948	6.550E-03	.1200	7.9243E-03	.1452	8.8527E-03	.1622	.5000	-.553
69	558	29.993	5.597	7.451E-03	.1365	9.0237E-03	.1653	1.0089E-02	.1848	.5000	-.830
70	547	22.395	4.282	5.613E-03	.1028	6.7767E-03	.1242	7.5602E-03	.1385	.5000	-1.000
72	526	4.246	.848	1.082E-03	.0198	1.2989E-03	.0238	1.4436E-03	.0264	.5000	1.000
73	521	.961	.178	2.232E-04	.0041	2.6765E-04	.0049	2.9727E-04	.0054	.5000	.886
74	520	.305	.054	6.857E-05	.0013	8.2220E-05	.0015	9.1304E-05	.0017	.5000	.640
75	521	1.613	.287	3.637E-04	.0067	4.3616E-04	.0080	4.8440E-04	.0089	.5000	0
76	551	20.966	3.443	4.938E-03	.0831	5.4849E-03	.1005	6.1237E-03	.1122	.5500	-0
77	515	1.929	.300	3.775E-04	.0069	4.5199E-04	.0083	5.0144E-04	.0092	.5500	-1.000
78	518	4.143	.624	7.878E-04	.0144	9.4399E-04	.0173	1.0479E-03	.0192	.5500	1.000
79	515	1.375	.251	3.157E-04	.0058	3.7795E-04	.0069	4.1932E-04	.0077	.5500	.935
80	549	20.162	3.859	5.072E-03	.0929	6.1270E-03	.1122	6.8379E-03	.1253	.6000	-0
81	547	18.108	3.759	4.929E-03	.0903	5.9508E-03	.1090	6.6391E-03	.1216	.6000	-.249
83	556	27.240	5.382	7.142E-03	.1308	8.6434E-03	.1583	9.6591E-03	.1770	.6000	-.748
84	528	.307	.061	7.856E-05	.0014	9.4378E-05	.0017	1.0495E-04	.0019	.6000	-1.000
85	519	3.984	.707	8.939E-04	.0164	1.0713E-03	.0196	1.1893E-03	.0218	.6000	1.000
86	517	1.371	.258	3.253E-04	.0060	3.8971E-04	.0071	4.3251E-04	.0079	.6000	.907
87	518	1.123	.193	2.442E-04	.0045	2.9264E-04	.0054	3.2485E-04	.0060	.6000	0
88	555	20.508	3.712	4.919E-03	.0901	5.9519E-03	.1090	6.6501E-03	.1218	.6500	-0
89	564	26.713	5.005	6.712E-03	.1230	8.1424E-03	.1492	9.1131E-03	.1670	.7000	-0
90	559	15.631	3.094	4.124E-03	.0756	4.9964E-03	.0915	5.5872E-03	.1024	.7000	-.235
91	556	16.159	3.194	4.241E-03	.0777	5.1334E-03	.0940	5.7373E-03	.1051	.7000	-.469
92	559	17.991	3.363	4.482E-03	.0821	5.4296E-03	.0995	6.0714E-03	.1112	.7000	-.704
93	557	17.460	3.548	4.714E-03	.0864	5.7073E-03	.1046	6.3793E-03	.1169	.7000	-.848
94	521	.026	.005	6.974E-06	.0001	8.3624E-06	.0002	9.2872E-06	.0002	.7000	1.000
95	523	.901	.160	2.040E-04	.0037	2.4471E-04	.0045	2.7188E-04	.0050	.7000	.908
96	524	.417	.074	9.446E-05	.0017	1.1337E-04	.0021	1.2597E-04	.0023	.7000	0
97	572	26.877	5.057	6.860E-03	.1257	8.2411E-03	.1528	9.3509E-03	.1713	.7500	-0
98	579	38.632	6.866	9.401E-03	.1722	1.1456E-02	.2099	1.2861E-02	.2356	.8000	-0

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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
35	F	RAM-DNO	8.00	555.1	1305	49.99	-7.99	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	U-INF (FT/SEC)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .009FT)	SIER (R= .009FT)	SWITCH POSITION
94.6	.057	2547	3813	5.043E-05	7.016E-08	2.92E 06	5.470E-02	3.581E-02	2

TC NO	TW	DTWDT	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF	FUSELAGE A/L	FUSELAGE Y/YMAX
99	573	18.384	3.563	4.868E-03	.0890	5.9245E-03	.1083	6.6457E-03	.1215	.8000	-.223
100	566	14.095	2.722	3.682E-03	.0673	4.4718E-03	.0818	5.0089E-03	.0916	.8000	-.446
101	568	14.492	3.042	4.128E-03	.0755	5.0161E-03	.0917	5.6211E-03	.1028	.8000	-.669
102	572	14.849	3.133	4.272E-03	.0781	5.1966E-03	.0950	5.8275E-03	.1065	.8000	-.806
103	578	28.850	5.765	7.921E-03	.1449	9.6604E-03	.1766	1.0847E-02	.1983	.8500	-0
104	588	27.379	5.038	7.020E-03	.1283	8.5805E-03	.1569	9.6936E-03	.1765	.9000	-0
105	574	20.728	4.132	5.649E-03	.1033	6.8757E-03	.1257	7.7133E-03	.1410	.9000	-.226
106	565	16.200	3.217	4.367E-03	.0799	5.2781E-03	.0965	5.9112E-03	.1081	.9000	-.452
107	575	12.629	2.310	3.162E-03	.0578	3.8507E-03	.0704	4.3209E-03	.0790	.9000	-.678
108	574	11.023	2.076	2.837E-03	.0519	3.4526E-03	.0631	3.8731E-03	.0708	.9000	-.817
109	543	1.096	.221	2.899E-04	.0053	3.4978E-04	.0064	3.9008E-04	.0071	.9000	1.000
110	519	.949	.179	2.341E-04	.0043	2.8219E-04	.0052	3.1444E-04	.0057	.9000	.884
111	538	.834	.138	1.775E-04	.0032	2.1340E-04	.0039	2.3831E-04	.0044	.9000	.610
112	592	30.985	6.059	8.493E-03	.1553	1.0395E-02	.1901	1.1706E-02	.2140	.9500	-0
114	598	42.125	8.261	1.168E-02	.2135	1.4316E-02	.2617	1.6142E-02	.2951	.9900	-0
115	605	39.061	7.904	1.128E-02	.2062	1.3863E-02	.2535	1.5655E-02	.2862	.9900	-.253
116	599	23.481	4.738	6.705E-03	.1226	8.2239E-03	.1504	9.2746E-03	.1696	.9900	-.507
117	587	16.988	3.410	4.748E-03	.0868	5.8028E-03	.1061	6.5279E-03	.1193	.9900	-.660
118	584	12.263	2.253	3.122E-03	.0571	3.8121E-03	.0697	4.2854E-03	.0783	.9900	-.793
119	546	3.671	.721	9.497E-04	.0174	1.1467E-03	.0210	1.2794E-03	.0234	.9900	.780
120	537	1.841	.210	2.733E-04	.0050	3.2924E-04	.0060	3.6678E-04	.0067	.9900	.305
										LOWER WING SURFACE X/C	LOWER WING SURFACE Y/S
121	561	19.897	3.832	5.145E-03	.0941	6.2388E-03	.1141	6.9806E-03	.1276	0	.050
122	571	23.347	4.003	5.453E-03	.0997	6.6324E-03	.1213	7.4365E-03	.1360	0	.100
124	572	18.014	3.290	4.486E-03	.0820	5.4973E-03	.0998	6.1200E-03	.1119	.2000	.100
126	573	9.012	1.557	2.124E-03	.0388	2.5849E-03	.0473	2.8991E-03	.0530	.6000	.100
127	578	14.543	2.663	3.659E-03	.0669	4.4588E-03	.0815	5.0058E-03	.0915	.7000	.100
128	600	39.758	5.580	7.916E-03	.1447	9.7152E-03	.1776	1.0961E-02	.2004	.9000	.100
134	564	24.042	5.923	7.993E-03	.1461	9.7019E-03	.1774	1.0863E-02	.1986	0	.150
135	566	28.327	5.159	6.982E-03	.1276	8.4799E-03	.1550	9.4991E-03	.1737	0	.250
136	585	30.531	5.611	7.791E-03	.1424	9.5149E-03	.1740	1.0699E-02	.1956	.1000	.250
137	583	21.869	3.771	5.217E-03	.0954	6.3673E-03	.1164	7.1559E-03	.1308	.2000	.250
138	578	15.926	3.005	4.131E-03	.0755	5.0350E-03	.0921	5.6531E-03	.1034	.4000	.250
140	581	14.335	2.550	3.523E-03	.0644	4.2984E-03	.0786	4.8297E-03	.0883	.6000	.250
142	580	14.865	2.478	3.417E-03	.0625	4.1670E-03	.0762	4.6808E-03	.0856	.9000	.250
147	574	26.446	4.982	6.815E-03	.1246	8.2972E-03	.1517	9.3042E-03	.1702	0	.450
148	591	30.049	5.538	7.750E-03	.1417	9.4817E-03	.1734	1.0675E-02	.1952	.1000	.450
149	580	31.960	6.036	8.317E-03	.1521	1.0142E-02	.1854	1.1391E-02	.2083	0	.500
150	589	30.616	6.150	8.588E-03	.1570	1.0503E-02	.1920	1.1820E-02	.2161	.1000	.500
151	583	25.125	5.032	6.964E-03	.1273	8.4990E-03	.1554	9.5520E-03	.1746	.2000	.500
152	585	21.172	3.772	5.234E-03	.0957	6.3916E-03	.1169	7.1863E-03	.1314	.4000	.500
154	584	16.677	3.063	4.243E-03	.0776	5.1796E-03	.0947	5.8223E-03	.1064	.6000	.500
156	584	15.749	2.542	3.523E-03	.0644	4.3018E-03	.0786	4.8359E-03	.0884	.8000	.500
157	572	11.462	2.094	2.856E-03	.0522	3.4751E-03	.0635	3.8473E-03	.0713	.9000	.500
163	576	30.666	5.777	7.919E-03	.1448	9.6447E-03	.1763	1.0824E-02	.1979	0	.550
164	588	32.662	6.194	8.636E-03	.1579	1.0557E-02	.1930	1.1879E-02	.2172	.1000	.550
165	579	28.435	5.368	7.388E-03	.1351	9.0058E-03	.1647	1.0113E-02	.1849	0	.600
166	591	32.224	5.938	8.307E-03	.1519	1.0163E-02	.1858	1.1441E-02	.2092	.1000	.600
167	577	29.956	5.484	7.528E-03	.1376	9.1719E-03	.1677	1.0296E-02	.1882	0	.650
168	586	29.037	5.823	8.090E-03	.1479	9.8821E-03	.1807	1.1113E-02	.2032	.1000	.650
169	571	26.627	4.859	6.615E-03	.1209	8.0451E-03	.1471	9.0197E-03	.1649	0	.700
170	565	19.034	3.463	4.676E-03	.0855	5.6771E-03	.1038	6.3572E-03	.1162	.1000	.700
171	579	30.197	5.534	7.623E-03	.1394	9.2935E-03	.1699	1.0437E-02	.1908	0	.750
172	592	33.823	6.048	8.482E-03	.1551	1.0383E-02	.1898	1.1693E-02	.2138	.1000	.750
173	580	27.611	5.215	7.187E-03	.1314	8.7629E-03	.1602	9.8424E-03	.1799	.2000	.750
175	579	22.307	4.584	6.315E-03	.1155	7.6997E-03	.1408	8.6477E-03	.1581	.4000	.750
176	557	6.440	1.238	1.653E-03	.0302	2.0021E-03	.0366	2.2384E-03	.0409	.7000	.750
178	576	15.145	2.771	3.797E-03	.0694	4.6248E-03	.0846	5.1902E-03	.0949	.8000	.750
183	564	13.950	1.999	2.698E-03	.0493	3.2747E-03	.0599	3.6667E-03	.0670	0	.900
184	577	18.381	3.365	4.620E-03	.0845	5.6294E-03	.1029	6.3194E-03	.1155	.2000	.900
185	580	14.281	2.618	3.607E-03	.0659	4.3976E-03	.0804	4.9392E-03	.0903	.6000	.900
186	571	11.286	2.060	2.806E-03	.0513	3.4131E-03	.0624	3.8268E-03	.0700	.8000	.900
										UPPER WING SURFACE X/C	UPPER WING SURFACE Y/S
129	534	.163	.025	3.206E-05	.0006	3.8596E-05	.0007	4.2975E-05	.0008	.1000	.100
130	536	.157	.026	3.440E-05	.0006	4.1431E-05	.0008	4.6147E-05	.0008	.2000	.100
131	539	.186	.034	4.482E-05	.0008	5.4013E-05	.0010	6.0189E-05	.0011	.4000	.100
132	543	.367	.070	9.180E-05	.0017	1.1084E-04	.0020	1.2361E-04	.0023	.7000	.100
133	544	.878	.153	2.012E-04	.0037	2.4277E-04	.0044	2.7079E-04	.0050	.9000	.100
143	537	.327	.066	8.559E-05	.0016	1.0307E-04	.0019	1.1482E-04	.0021	.1000	.250
145	541	.362	.061	8.000E-05	.0015	9.6480E-05	.0018	1.0756E-04	.0020	.4000	.250
146	544	.772	.135	1.768E-04	.0032	2.1338E-04	.0039	2.3799E-04	.0044	.9000	.250
158	541	1.007	.154	2.009E-04	.0037	2.4228E-04	.0044	2.7011E-04	.0049	.1000	.500
159	542	.891	.146	1.909E-04	.0035	2.3026E-04	.0042	2.5676E-04	.0047	.2000	.500
160	544	.671	.110	1.441E-04	.0026	1.7394E-04	.0032	1.9401E-04	.0035	.4000	.500
161	544	.588	.103	1.349E-04	.0025	1.6283E-04	.0030	1.8164E-04	.0033	.8000	.500
162	543	1.991	.271	3.555E-04	.0065	4.2894E-04	.0078	4.7832E-04	.0087	.9000	.500
179	540	.364	.065	8.548E-05	.0016	1.0307E-04	.0019	1.1490E-04	.0021	.1000	.750
180	542	.339	.061	7.967E-05	.0015	9.6089E-05	.0018	1.0713E-04	.0020	.2000	.750
181	542	.252	.032	4.140E-05	.0008	4.9941E-05	.0009	5.5689E-05	.0010	.4000	.750
182	542	.762	.129	1.684E-04	.0031	2.0315E-04	.0037	2.2649E-04	.0041	.8000	.750
										VERTICAL STABILIZER X/C	VERTICAL STABILIZER Z/S
187	535	.692	.113	1.464E-04	.0027	1.7622E-04	.0032	1.9624E-04	.0036	0	.100
188	533	.682	.110	1.532E-04	.0028	1.8441E-04	.0034	2.0529E-04	.0038	.1000	.100
189	532	.283	.047	6.133E-05	.0011	7.3773E-05	.0013	8.2105E-05	.0015	.4000	.100
191	533	.489	.093	1.200E-04	.0022	1.4437E-04	.0026	1.6070E-04	.0029	.8000	.100
192	536	1.734	.330	4.284E-04	.0078	5.1595E-04	.0094	5.7466E-04	.0105	0	.250
193	534	1.353	.239	3.044E-04	.0056	3.6635E-04	.0067	4.0787E-04	.0075	.1000	.250
194	533	.393	.066	8.543E-05	.0016	1.0280E-04	.0019	1.1443E-04	.0021	.4000	.250
195	533	.816	.146	1.891E-04	.0035	2.2754E-04	.0042	2.5330E-04	.0046	.8000	.250
197	535	2.463	.454	5.899E-04	.0108	7.1019E-04	.0130	7.9086E-04	.0145	.1000	.500
198	535	.768	.138	1.786E-04	.0033	2.1504E-04	.0039	2.3947E-04	.0044	.4000	.500
200	534	1.131	.202	2.622E-04	.0048	3.1558E-04	.0058	3.5134E-04	.0064	.8000	.500
201	539	3.304	.629	8.203E-04	.0150	9.8865E-04	.0181	1.1017E-03	.0201	0	.750
202	536	3.111	.355	4.611E-04	.0084	5.5531E-04	.0102	6.1850E-04	.0113	.1000	.750
203	534	1.049	.120	1.549E-04	.0028	1.8649E-04	.0034	2.0783E-04	.0038	.4000	.750
204	535	1.589	.190	2.462E-04	.0045	2.9642E-04	.0054	3.3008E-04	.0060	.8000	.750

GROUP
99

5/29/71

AEDC(AHO•INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
36	7	NAH-UHO	8.00	555.0	1309	39.98	2.02	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FR (R= .009FT)	SIFR (R= .009FT)	SWITCH POSITION
94.8	.057	2.547	3817	5.030E-09	7.034E-08	2.02E 06	5.471E-02	3.986E-02	1

TC NO	TW	DINCT	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF	FUSELAGE X/L	FUSELAGE Y/YMAX
1	594	151.871	28.035	3.929E-02	.7174	4.8098E-02	.8783	5.4130E-02	.9893	.0100	0
2	587	129.555	20.998	2.909E-02	.5317	3.9538E-02	.6499	3.9966E-02	.7304	.0100	-0
3	574	88.342	14.194	1.934E-02	.3534	2.3530E-02	.4301	2.6393E-02	.4824	.0100	-.441
4	548	17.821	2.727	3.986E-03	.0695	4.3305E-03	.0791	4.8526E-03	.0883	.0100	-1.000
5	543	3.571	.564	7.368E-04	.0135	8.8854E-04	.0162	9.9058E-04	.0181	.0100	0
6	579	107.486	18.905	2.537E-02	.4637	3.0920E-02	.5691	3.4716E-02	.6345	.0200	-0
7	577	92.327	16.902	2.310E-02	.4223	2.8136E-02	.5142	3.1575E-02	.5771	.0300	-0
8	570	83.306	14.748	1.997E-02	.3649	2.4270E-02	.4436	2.7200E-02	.4971	.0300	-.303
9	547	15.344	2.431	3.192E-03	.0583	3.8943E-03	.0704	4.3004E-03	.0786	.0300	-1.000
10	544	3.970	.718	9.351E-04	.0171	1.1282E-03	.0206	1.2982E-03	.0230	.0300	0
11	576	83.765	16.724	2.284E-02	.4175	2.7819E-02	.5084	3.1211E-02	.5704	.0400	-0
12	567	60.472	12.016	1.620E-02	.2961	1.9672E-02	.3595	2.2032E-02	.4027	.0500	-0
13	565	55.603	11.037	1.484E-02	.2712	1.8009E-02	.3291	2.0161E-02	.3685	.0500	-.310
14	550	18.976	2.972	3.918E-03	.0716	4.7354E-03	.0865	5.2865E-03	.0966	.0500	-1.000
15	545	4.405	.914	1.196E-03	.0219	1.4439E-03	.0264	1.6104E-03	.0294	.0500	0
16	571	82.117	7.903	1.072E-02	.1959	1.3032E-02	.2382	1.4608E-02	.2670	.0800	-0
17	565	39.435	8.741	9.067E-03	.1657	1.1003E-02	.2011	1.2319E-02	.2251	.0800	-.300
18	555	10.823	1.808	2.396E-03	.0438	2.8988E-03	.0530	3.2898E-03	.0592	.0800	-1.000
19	564	31.368	5.879	7.899E-03	.1444	9.5841E-03	.1752	1.0728E-02	.1961	.1000	-0
20	571	44.100	3.415	4.629E-03	.0846	5.6268E-03	.1028	6.3067E-03	.1153	.1000	-.383
21	567	30.631	5.074	6.846E-03	.1251	8.3136E-03	.1519	9.3119E-03	.1702	.1000	-.817
22	554	6.908	1.250	1.657E-03	.0303	2.0041E-03	.0366	2.2390E-03	.0409	.1000	-1.000
23	551	.711	.128	1.697E-04	.0031	2.0515E-04	.0037	2.2909E-04	.0042	.1000	.783
24	553	3.944	.757	1.001E-03	.0183	1.2106E-03	.0221	1.3522E-03	.0247	.1000	0
25	562	24.964	5.085	6.808E-03	.1244	8.2543E-03	.1509	9.2352E-03	.1688	.1500	-.893
26	551	6.553	1.291	1.703E-03	.0311	2.0588E-03	.0376	2.2986E-03	.0420	.1500	-1.000
27	547	.704	.135	1.771E-04	.0032	2.1376E-04	.0039	2.3849E-04	.0044	.1500	.664
28	549	5.109	.810	1.067E-03	.0195	1.2893E-03	.0236	1.4391E-03	.0263	.1500	0
29	560	26.078	4.734	6.328E-03	.1157	7.6701E-03	.1402	8.5795E-03	.1568	.2000	-0
30	561	30.462	6.034	8.070E-03	.1475	9.7813E-03	.1788	1.0942E-02	.2000	.2000	-.678
31	561	32.250	6.742	9.013E-03	.1647	1.0924E-02	.1997	1.2220E-02	.2233	.2000	-.466
32	556	23.116	4.567	6.068E-03	.1109	7.3446E-03	.1342	8.2082E-03	.1500	.2000	-.792
33	549	8.307	1.499	1.974E-03	.0361	2.3855E-03	.0436	2.6626E-03	.0487	.2000	-1.000
34	541	.414	.079	1.029E-04	.0019	1.2399E-04	.0023	1.3818E-04	.0025	.2000	.888
35	542	2.696	.485	6.326E-04	.0116	7.6289E-04	.0139	8.5047E-04	.0155	.2000	0
36	564	6.463	1.057	1.382E-03	.0253	1.6676E-03	.0305	1.8595E-03	.0340	.2100	0
37	563	5.656	1.018	1.330E-03	.0243	1.6044E-03	.0293	1.7889E-03	.0327	.2200	0
38	541	3.467	.568	7.137E-04	.0130	8.6052E-04	.0157	9.5914E-04	.0175	.2300	0
39	539	2.418	.474	6.156E-04	.0113	7.4171E-04	.0136	8.2639E-04	.0151	.2400	.486
40	539	1.328	.209	2.719E-04	.0050	3.2762E-04	.0060	3.6498E-04	.0067	.2500	0
41	538	.718	.144	1.874E-04	.0034	2.2575E-04	.0041	2.5146E-04	.0046	.2700	.465
42	538	.778	.156	2.030E-04	.0037	2.4448E-04	.0045	2.7232E-04	.0050	.2700	.465
43	538	.777	.118	1.537E-04	.0028	1.8512E-04	.0034	2.0622E-04	.0038	.2700	0
44	562	20.707	3.649	4.888E-03	.0893	5.9267E-03	.1083	6.6315E-03	.1212	.3000	-0
45	563	23.161	4.338	5.818E-03	.1063	7.0569E-03	.1290	7.8975E-03	.1443	.3000	-.312
46	565	28.623	5.997	8.063E-03	.1474	9.7840E-03	.1788	1.0953E-02	.2002	.3000	-.504
47	548	19.925	2.956	3.938E-03	.0720	4.7697E-03	.0872	5.3327E-03	.0975	.3000	-.857
48	549	9.990	1.693	2.228E-03	.0407	2.6911E-03	.0492	3.0034E-03	.0549	.3000	-1.000
49	539	2.212	.433	5.633E-04	.0103	6.7875E-04	.0124	7.5626E-04	.0138	.3000	.983
50	539	.790	.155	2.009E-04	.0037	2.4202E-04	.0044	2.6963E-04	.0049	.3000	.853
51	537	.314	.065	8.409E-05	.0015	1.0126E-04	.0019	1.1279E-04	.0021	.3000	.433
52	537	.459	.095	1.227E-04	.0022	1.4779E-04	.0027	1.6460E-04	.0030	.3000	.361
53	537	.718	.121	1.569E-04	.0029	1.8895E-04	.0035	2.1044E-04	.0038	.3000	0
54	554	17.493	3.452	4.573E-03	.0836	5.5314E-03	.1011	6.1791E-03	.1129	.4000	-0
55	554	19.136	3.778	5.010F-03	.0916	6.0624E-03	.1108	6.7735E-03	.1238	.4000	-.321
56	557	25.154	4.974	6.622E-03	.1210	8.0193E-03	.1466	8.9649E-03	.1638	.4000	-.526
57	552	21.637	3.793	5.016E-03	.0917	6.0662E-03	.1109	6.7752E-03	.1238	.4000	-.951
58	543	12.031	2.164	2.827E-03	.0517	3.4093E-03	.0623	3.8011E-03	.0695	.4000	-1.000
59	537	5.074	.965	1.251E-03	.0229	1.5062E-03	.0275	1.6775E-03	.0307	.4000	1.000
60	533	1.739	.311	4.013E-04	.0073	4.8274E-04	.0088	5.3728E-04	.0098	.4000	.906
61	532	.612	.109	1.409E-04	.0026	1.6951E-04	.0031	1.8862E-04	.0034	.4000	.750
62	532	.992	.156	2.009E-04	.0037	2.4159E-04	.0044	2.6884E-04	.0049	.4000	0
63	537	11.583	2.077	2.694E-03	.0492	3.2441E-03	.0593	3.6133E-03	.0660	.4500	-1.000
64	532	4.741	.950	1.224E-03	.0224	1.4716E-03	.0269	1.6375E-03	.0299	.4500	1.000
65	529	1.750	.322	4.132E-04	.0076	4.9660E-04	.0091	5.5234E-04	.0101	.4500	.990
66	551	16.135	3.004	3.966E-03	.0725	4.7951E-03	.0876	5.3543E-03	.0979	.5000	-0
67	552	16.816	3.224	4.263E-03	.0779	5.1543E-03	.0942	5.7565E-03	.1052	.5000	-.277
68	554	20.381	4.023	5.330E-03	.0974	6.4483E-03	.1179	7.2038E-03	.1317	.5000	-.553
69	558	25.548	4.774	6.364E-03	.1163	7.7091E-03	.1409	8.6199E-03	.1575	.5000	-.830
70	550	21.389	4.096	5.401E-03	.0987	6.5273E-03	.1193	7.2870E-03	.1332	.5000	-1.000
72	532	4.440	.890	1.145E-03	.0209	1.3773E-03	.0252	1.5325E-03	.0280	.5000	1.000
73	528	1.275	.234	3.001E-04	.0055	3.6048E-04	.0066	4.0083E-04	.0073	.5000	.886
74	527	.374	.067	8.540E-05	.0016	1.0258E-04	.0019	1.1405E-04	.0021	.5000	.640
75	528	1.322	.238	3.019E-04	.0055	3.6266E-04	.0066	4.0324E-04	.0074	.5000	0
76	554	16.483	2.711	3.590E-03	.0656	4.3427E-03	.0794	4.8512E-03	.0887	.5500	-0
77	526	2.176	.341	4.356E-04	.0080	5.2313E-04	.0096	5.8153E-04	.0106	.5500	-1.000
78	529	3.936	.596	7.650E-04	.0140	9.1933E-04	.0168	1.0225E-03	.0187	.5500	1.000
79	526	1.476	.271	3.463E-04	.0063	4.1585E-04	.0076	4.6227E-04	.0084	.5500	.935
80	549	15.623	2.991	3.940E-03	.0720	4.7606E-03	.0870	5.3140E-03	.0971	.6000	-0
81	548	14.549	3.023	3.976E-03	.0727	4.8029E-03	.0878	5.3602E-03	.0980	.6000	-.249
83	557	22.686	4.485	5.968E-03	.1091	7.2260E-03	.1321	8.0775E-03	.1476	.6000	-.748
84	530	.114	.023	2.937E-05	.0005	3.5302E-05	.0006	3.9267E-05	.0007	.6000	-1.000
85	529	4.865	.869	1.115E-03	.0204	1.3396E-03	.0245	1.4899E-03	.0272	.6000	1.000
86	528	1.474	.279	3.572E-04	.0065	4.2905E-04	.0078	4.7705E-04	.0087	.6000	.907
87	526	1.330	.230	2.938E-04	.0054	3.5275E-04	.0064	3.9212E-04	.0072	.6000	0
88	549	13.689	2.471	3.255E-03	.0595	3.9330E-03	.0719	4.3902E-03	.0802	.6500	-0
89	553	12.471	2.323	3.074E-03	.0562	3.7182E-03	.0680	4.1531E-03	.0759	.7000	-0
90	554	12.621	2.492	3.303E-03	.0604	3.9965E-03	.0730	4.4651E-03	.0816	.7000	-.235
91	554	13.357	2.637	3.495E-03	.0639	4.2285E-03	.0773	4.7242E-03	.0863	.7000	-.469
92	560	15.370	2.875	3.842E-03	.0702	4.6564E-03	.0851	5.2084E-03	.0952	.7000	-.704
93	558	14.771	3.003	4.003E-03	.0732	4.8462E-03	.0886	5.4207E-03	.0991	.7000	-.948
94	530	.212	.046	5.896E-05	.0011	7.0871E-05	.0013	7.8030E-05	.0014	.7000	1.000
95	532	2.023	.362	4.656E-04	.0085	5.5985E-04	.0102	6.2294E-04	.0114	.7000	.908
96	530	1.858	.332	4.265E-04	.0078	5.1269E-04	.0094	5.7033E-04	.0104	.7000	0
97	558	10.443	1.951	2.600E-03	.0475	3.1493E-03	.0576	3.5212E-03	.0644	.7500	-0
98	561	11.866	2.090	2.797E-03	.0511	3.3913E-03	.0620	3.7941E-03	.0693	.8000	-0

GROUP
100

NOT REPRODUCIBLE

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL A
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
36	7	AAR-DWG	8.00	553.1	1311	39.98	2.02	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (R= .009FT)	SIFR (R= .009FT)	SWITCH POSITION
95.0	.057	2.538	3821	5.883E-05	7.050E-08	2.50E 06	5.484E-02	3.597E-02	2

TC NO	TW	DIRECT	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF
FUSELAGE									X/L Y/YMAX
99	558	10.971	2.110	2.801E-03	.0513	3.3909E-03	.0621	3.7403E-03	.0494	.8000 -.223
100	558	10.881	2.092	2.776E-03	.0508	3.3613E-03	.0615	3.7570E-03	.0688	.8000 -.446
101	560	11.941	2.496	3.329E-03	.0609	4.0290E-03	.0737	4.5058E-03	.0825	.8000 -.669
102	564	13.360	2.798	3.742E-03	.0685	4.5302E-03	.0831	5.0782E-03	.0929	.8000 -.806
103	561	9.446	1.871	2.493E-03	.0456	3.0214E-03	.0553	3.3791E-03	.0618	.8500 -0
104	564	8.793	1.599	2.139E-03	.0391	2.5938E-03	.0475	2.9025E-03	.0531	.9000 -0
105	560	8.762	1.735	2.310E-03	.0423	2.7989E-03	.0512	3.1300E-03	.0573	.9000 -.226
106	556	10.499	2.078	2.749E-03	.0503	3.3269E-03	.0609	3.7172E-03	.0680	.9000 -.452
107	565	10.069	1.831	2.454E-03	.0449	2.9775E-03	.0545	3.3327E-03	.0610	.9000 -.678
108	564	8.813	1.652	2.211E-03	.0405	2.6815E-03	.0491	3.0009E-03	.0549	.9000 -.817
109	543	.300	.061	7.888E-05	.0014	9.5112E-05	.0017	1.0602E-04	.0019	.9000 1.000
110	540	.586	.102	1.319E-04	.0024	1.5888E-04	.0029	1.7702E-04	.0032	.9000 .884
111	540	.604	.099	1.278E-04	.0023	1.5397E-04	.0028	1.7154E-04	.0031	.9000 .610
112	567	7.751	1.498	2.013E-03	.0368	2.4436E-03	.0447	2.7363E-03	.0501	.9500 -0
114	569	13.486	2.607	3.511E-03	.0643	4.2643E-03	.0780	4.7764E-03	.0874	.9900 -0
115	573	10.935	2.180	2.954E-03	.0541	3.5916E-03	.0657	4.0266E-03	.0737	.9900 -.253
116	572	9.983	1.989	2.692E-03	.0493	3.2733E-03	.0599	3.6691E-03	.0671	.9900 -.507
117	568	9.479	1.885	2.537E-03	.0464	3.0808E-03	.0564	3.4506E-03	.0632	.9900 -.660
118	568	7.587	1.383	1.862E-03	.0341	2.2610E-03	.0414	2.5324E-03	.0463	.9900 -.743
119	544	1.667	.327	4.265E-04	.0078	5.1443E-04	.0094	5.7352E-04	.0105	.9900 .780
120	536	.944	.188	1.396E-04	.0026	1.6798E-04	.0031	1.8702E-04	.0034	.9900 .305
LOWER WING SURFACE									X/C Y/S
121	563	21.930	4.228	5.652E-03	.1034	6.8528E-03	.1254	7.4675E-03	.1403	0 .050
122	574	27.411	4.706	6.381E-03	.1168	7.7607E-03	.1420	8.7014E-03	.1592	0 .100
124	568	16.228	2.957	3.977E-03	.0728	4.8290E-03	.0884	5.4080E-03	.0990	.2000 .100
126	564	8.700	1.486	1.989E-03	.0364	2.4116E-03	.0441	2.6986E-03	.0494	.6000 .100
127	565	9.859	1.794	2.405E-03	.0440	2.9176E-03	.0534	3.2698E-03	.0598	.7000 .100
128	570	12.182	1.683	2.270E-03	.0415	2.7572E-03	.0505	3.0889E-03	.0565	.9000 .100
134	569	35.816	7.321	9.858E-03	.1804	1.1972E-02	.2191	1.3410E-02	.2454	0 .150
135	570	36.611	6.678	9.008E-03	.1649	1.0944E-02	.2003	1.2261E-02	.2244	0 .250
136	580	32.090	5.883	8.043E-03	.1472	9.7997E-03	.1793	1.1001E-02	.2013	.1000 .250
137	574	21.139	3.030	4.925E-03	.0901	5.9915E-03	.1097	6.7186E-03	.1230	.2000 .250
138	569	14.008	2.744	3.698E-03	.0677	4.4912E-03	.0822	5.0310E-03	.0921	.4000 .250
140	569	11.616	2.054	2.769E-03	.0507	3.3632E-03	.0616	3.7677E-03	.0690	.6000 .250
142	564	10.866	1.797	2.405E-03	.0440	2.9176E-03	.0534	3.2692E-03	.0598	.9000 .250
147	578	36.064	6.806	9.289E-03	.1699	1.1307E-02	.2069	1.2689E-02	.2322	0 .450
148	585	33.106	6.084	8.376E-03	.1533	1.0222E-02	.1871	1.1487E-02	.2102	.1000 .450
149	581	39.581	7.476	1.024E-02	.1875	1.2486E-02	.2285	1.4021E-02	.2566	0 .500
150	583	33.287	6.665	9.147E-03	.1674	1.1154E-02	.2041	1.2529E-02	.2293	.1000 .500
151	574	23.444	4.676	6.347E-03	.1162	7.7215E-03	.1413	8.6988E-03	.1585	.2000 .500
152	574	14.987	3.360	4.555E-03	.0834	5.5403E-03	.1014	6.2119E-03	.1137	.4000 .500
154	571	13.928	2.542	3.433E-03	.0628	4.1716E-03	.0763	4.6743E-03	.0855	.6000 .500
156	569	12.502	2.004	2.700E-03	.0494	3.2799E-03	.0600	3.6743E-03	.0672	.8000 .500
157	559	8.374	1.520	2.022E-03	.0370	2.4497E-03	.0448	2.7391E-03	.0501	.9000 .500
163	576	38.977	7.348	9.993E-03	.1829	1.2161E-02	.2226	1.3642E-02	.2497	0 .550
164	583	34.776	6.578	9.029E-03	.1652	1.1011E-02	.2015	1.2368E-02	.2264	.1000 .550
165	580	36.175	6.834	9.350E-03	.1711	1.1393E-02	.2085	1.2792E-02	.2341	0 .600
166	586	36.893	6.783	9.351E-03	.1711	1.1414E-02	.2089	1.2830E-02	.2348	.1000 .600
167	577	37.439	6.854	9.339E-03	.1709	1.1370E-02	.2081	1.2757E-02	.2335	0 .650
168	581	32.747	6.554	8.982E-03	.1644	1.0950E-02	.2004	1.2296E-02	.2250	.1000 .650
169	572	34.658	6.330	8.669E-03	.1588	1.0418E-02	.1907	1.1678E-02	.2137	0 .700
170	561	20.722	3.783	5.014E-03	.0918	6.0759E-03	.1112	6.7953E-03	.1244	.1000 .700
171	581	37.385	6.857	9.388E-03	.1718	1.1442E-02	.2094	1.2847E-02	.2351	0 .750
172	587	37.556	6.700	9.252E-03	.1693	1.1297E-02	.2068	1.2701E-02	.2325	.1000 .750
173	577	27.910	5.269	7.173E-03	.1313	8.7328E-03	.1598	9.7984E-03	.1793	.2000 .750
175	570	20.902	4.275	5.766E-03	.1055	7.0046E-03	.1282	7.8476E-03	.1436	.4000 .750
176	551	5.379	1.031	1.356E-03	.0248	1.6386E-03	.0300	1.8293E-03	.0335	.7000 .750
178	564	12.834	2.334	3.122E-03	.0571	3.7864E-03	.0693	4.2371E-03	.0775	.8000 .750
183	563	15.740	2.854	3.813E-03	.0551	3.6528E-03	.0669	4.0869E-03	.0748	0 .900
184	571	18.847	3.439	4.645E-03	.0850	5.6438E-03	.1033	6.3241E-03	.1157	.2000 .900
185	569	13.623	2.484	3.345E-03	.0612	4.0623E-03	.0743	4.5502E-03	.0833	.6000 .900
186	561	9.218	1.674	2.230E-03	.0408	2.7019E-03	.0494	3.0218E-03	.0553	.8000 .900
UPPER WING SURFACE									X/C Y/S
129	536	.461	.070	9.042E-05	.0017	1.0884E-04	.0020	1.2118E-04	.0022	.1000 .100
130	537	.301	.051	6.561E-05	.0012	7.8987E-05	.0014	8.7955E-05	.0016	.2000 .100
131	540	.096	.018	2.293E-05	.0004	2.7631E-05	.0005	3.0786E-05	.0006	.4000 .100
132	543	.176	.034	4.378E-05	.0008	5.2792E-05	.0010	5.8847E-05	.0011	.7000 .100
133	540	.474	.083	1.071E-04	.0020	1.2905E-04	.0024	1.4379E-04	.0026	.9000 .100
143	539	.909	.183	2.369E-04	.0043	2.8539E-04	.0052	3.1790E-04	.0058	.1000 .250
145	542	.279	.047	6.126E-05	.0011	7.3854E-05	.0014	8.2311E-05	.0015	.4000 .250
146	541	.573	.100	1.295E-04	.0024	1.5607E-04	.0029	1.7389E-04	.0032	.9000 .250
158	541	1.228	.197	2.433E-04	.0045	2.9329E-04	.0054	3.2684E-04	.0060	.1000 .500
159	542	.517	.084	1.098E-04	.0020	1.3241E-04	.0024	1.4759E-04	.0027	.2000 .500
160	544	.295	.048	6.286E-05	.0012	7.5803E-05	.0014	8.4506E-05	.0015	.4000 .500
161	542	.331	.058	7.506E-05	.0014	9.0477E-05	.0017	1.0083E-04	.0018	.8000 .500
162	539	1.360	.185	2.394E-04	.0044	2.8839E-04	.0053	3.2124E-04	.0059	.9000 .500
179	541	.432	.078	1.008E-04	.0018	1.2148E-04	.0022	1.3536E-04	.0025	.1000 .750
180	541	.167	.030	3.910E-05	.0007	4.7123E-05	.0009	5.2512E-05	.0010	.2000 .750
181	542	.103	.013	1.672E-05	.0003	2.0156E-05	.0004	2.2464E-05	.0004	.4000 .750
182	539	.599	.101	1.307E-04	.0024	1.5746E-04	.0029	1.7540E-04	.0032	.8000 .750
VENTICAL STABILIZER									X/C Z/S
187	537	.657	.107	1.384E-04	.0025	1.6662E-04	.0030	1.8554E-04	.0034	0 .100
188	534	.593	.103	1.325E-04	.0024	1.5939E-04	.0029	1.7739E-04	.0032	.1000 .100
189	533	.433	.073	9.337E-05	.0017	1.1227E-04	.0021	1.2492E-04	.0023	.4000 .100
191	532	.127	.024	3.084E-05	.0006	3.7080E-05	.0007	4.1251E-05	.0008	.8000 .100
192	536	.975	.185	2.393E-04	.0044	2.8802E-04	.0053	3.2068E-04	.0059	0 .250
193	534	1.008	.175	2.249E-04	.0041	2.7057E-04	.0050	3.0112E-04	.0055	.1000 .250
194	532	.684	.115	1.476E-04	.0027	1.7749E-04	.0032	1.9748E-04	.0036	.4000 .250
195	532	.581	.104	1.334E-04	.0024	1.6033E-04	.0029	1.7837E-04	.0033	.8000 .250
197	534	1.713	.316	4.064E-04	.0074	4.8883E-04	.0089	5.4402E-04	.0100	.1000 .500
198	534	1.042	.186	2.399E-04	.0044	2.8855E-04	.0053	3.2113E-04	.0059	.4000 .500
200	532	1.188	.212	2.727E-04	.0050	3.2784E-04	.0060	3.6474E-04	.0067	.8000 .500
201	536	2.399	.456	5.888E-04	.0108	7.0870E-04	.0130	7.8908E-04	.0144	0 .750
202	534	2.717	.369	4.981E-04	.0073	6.0798E-04	.0088	6.7298E-04	.0098	.1000 .750
203	532	.970	.110	1.418E-04	.0026	1.7049E-04	.0031	1.8969E-04	.0035	.4000 .750
204	534	2.824	.337	4.335E-04	.0079	5.2139E-04	.0095	5.8025E-04	.0106	.8000 .750

GROUP
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5/29/71

AEDC(AHO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
37	7	RAM-DNO	8.00	993.4	1311	29.90	12.10	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FR (R= .009FT)	SIFN (R= .009FT)	SWITCH POSITION
95.0	.057	2.540	3820	5.007E-09	7.047E-08	2.50E 06	5.465E-02	3.595E-02	1

TC NO	TW	DTWDT	W-DOT	M(TO)	M(TO)/MREF	M(.9TO)	M(.9TO)/MREF	M(.85TO)	M(.85TO)/MREF	FUSELAGE X/L	FUSELAGE Y/YMAX
1	602	169.633	31.429	4.436E-02	.8110	5.4435E-02	.9960	6.1405E-02	1.1236	0	0
2	584	114.834	19.175	2.638E-02	.4827	3.2187E-02	.5889	3.6165E-02	.6617	.0100	-0
3	571	74.142	11.891	1.607E-02	.2941	1.9531E-02	.3574	2.1887E-02	.4005	.0100	-.441
4	552	20.124	3.086	4.068E-03	.0744	4.9172E-03	.0900	5.4904E-03	.1005	.0100	-1.000
5	545	2.738	.433	5.656E-04	.0103	6.8231E-04	.0125	7.6085E-04	.0139	.0100	0
6	575	87.750	15.079	2.041E-02	.3733	2.4957E-02	.4567	2.7993E-02	.5122	.0200	-0
7	572	76.966	14.058	1.904E-02	.3484	2.3149E-02	.4236	2.5950E-02	.4748	.0300	-0
8	570	65.146	11.526	1.557E-02	.2848	1.8914E-02	.3461	2.1194E-02	.3878	.0300	-.303
9	551	15.726	2.496	3.289E-03	.0601	3.9691E-03	.0726	4.4308E-03	.0811	.0300	-1.000
10	546	2.849	.511	6.716E-04	.0123	8.1058E-04	.0148	9.0612E-04	.0165	.0300	0
11	572	66.184	13.185	1.785E-02	.3265	2.1695E-02	.3970	2.4317E-02	.4449	.0400	-0
12	566	46.934	9.326	1.253E-02	.2293	1.5207E-02	.2783	1.7027E-02	.3116	.0500	-0
13	565	43.263	8.598	1.152E-02	.2109	1.3983E-02	.2559	1.5653E-02	.2864	.0500	-.310
14	554	15.647	2.754	3.640E-03	.0666	4.4031E-03	.0806	4.9183E-03	.0900	.0500	-1.000
15	548	3.855	.801	1.050E-03	.0192	1.2684E-03	.0232	1.4193E-03	.0259	.0500	0
16	570	44.935	9.716	1.719E-02	.3412	9.1798E-03	.1716	1.0510E-02	.1923	.0800	-0
17	564	29.889	6.103	8.437E-03	.1691	8.2934E-03	.1518	9.2821E-03	.1698	.0800	-.380
18	559	9.966	1.697	2.256E-03	.0413	2.7326E-03	.0500	3.0590E-03	.0559	.0800	-1.000
19	565	23.289	4.364	5.469E-03	.1070	7.0953E-03	.1298	7.9414E-03	.1453	.1000	-0
20	570	32.094	6.484	8.356E-03	.0814	4.0784E-03	.0746	4.5701E-03	.0836	.1000	-.383
21	568	26.391	4.373	5.888E-03	.1077	7.1494E-03	.1308	8.0074E-03	.1465	.1000	-.817
22	558	6.024	1.092	1.451E-03	.0265	1.7567E-03	.0321	1.9637E-03	.0359	.1000	-1.000
23	555	.931	.169	2.231E-04	.0041	2.6998E-04	.0049	3.0163E-04	.0055	.1000	.783
24	556	4.202	.807	1.070E-03	.0196	1.2953E-03	.0237	1.4474E-03	.0265	.1000	0
25	563	20.147	4.107	5.494E-03	.1005	6.6615E-03	.1219	7.4539E-03	.1364	.1500	-.893
26	553	6.268	1.237	1.634E-03	.0299	1.9754E-03	.0361	2.2063E-03	.0404	.1500	-1.000
27	549	.837	.160	2.105E-04	.0039	2.5424E-04	.0047	2.8374E-04	.0052	.1500	.664
28	552	5.124	.814	1.072E-03	.0196	1.2962E-03	.0237	1.4472E-03	.0265	.1500	0
29	560	18.387	3.337	4.446E-03	.0813	5.3859E-03	.0986	6.0229E-03	.1102	.2000	-0
30	560	22.922	4.539	6.047E-03	.1106	7.3258E-03	.1340	8.1923E-03	.1499	.2000	-.278
31	560	24.988	5.223	6.957E-03	.1273	8.4283E-03	.1542	9.4251E-03	.1725	.2000	-.466
32	557	19.243	3.805	5.050E-03	.0924	6.1132E-03	.1119	6.8327E-03	.1250	.2000	-.792
33	552	7.652	1.383	1.822E-03	.0333	2.2022E-03	.0403	2.4588E-03	.0450	.2000	-1.000
34	541	.585	.112	1.450E-04	.0027	1.7481E-04	.0032	1.9482E-04	.0036	.2000	.888
35	544	5.007	.901	1.176E-03	.0215	1.4183E-03	.0260	1.5814E-03	.0289	.2000	0
36	548	12.461	2.043	2.677E-03	.0490	3.2325E-03	.0591	3.6065E-03	.0660	.2100	0
37	547	11.288	2.039	2.665E-03	.0488	3.2170E-03	.0589	3.5887E-03	.0657	.2200	0
38	545	8.648	1.369	1.788E-03	.0327	2.1571E-03	.0395	2.4055E-03	.0440	.2300	0
39	541	3.621	.710	9.214E-04	.0169	1.1104E-03	.0203	1.2372E-03	.0226	.2400	.486
40	540	2.845	.449	5.822E-04	.0107	7.0139E-04	.0128	7.8141E-04	.0143	.2500	0
41	539	.952	.192	2.482E-04	.0045	2.9897E-04	.0055	3.3301E-04	.0061	.2700	.465
42	538	1.050	.211	2.735E-04	.0050	3.2945E-04	.0060	3.6696E-04	.0067	.2700	.465
43	539	1.340	.204	2.643E-04	.0048	3.1832E-04	.0058	3.5457E-04	.0065	.2700	0
44	561	14.791	2.605	3.478E-03	.0636	4.2149E-03	.0771	4.7147E-03	.0863	.3000	-0
45	561	18.248	3.414	4.551E-03	.0833	5.5151E-03	.1009	6.1682E-03	.1129	.3000	-.312
46	563	22.483	4.706	6.292E-03	.1151	7.6290E-03	.1396	8.5359E-03	.1562	.3000	-.504
47	559	14.973	2.222	2.955E-03	.0541	3.5794E-03	.0655	4.0019E-03	.0732	.3000	-.857
48	551	8.712	1.479	1.946E-03	.0356	2.3524E-03	.0430	2.6262E-03	.0481	.3000	-1.000
49	541	2.332	.457	5.942E-04	.0109	7.1616E-04	.0131	7.9809E-04	.0146	.3000	.983
50	540	1.034	.203	2.635E-04	.0048	3.1757E-04	.0058	3.5383E-04	.0065	.3000	.853
51	538	.660	.138	1.767E-04	.0032	2.1278E-04	.0039	2.3700E-04	.0043	.3000	.433
52	538	.554	.114	1.481E-04	.0027	1.7842E-04	.0033	1.9872E-04	.0036	.3000	.361
53	538	.969	.163	2.113E-04	.0039	2.5445E-04	.0047	2.8339E-04	.0052	.3000	0
54	552	12.383	2.442	3.219E-03	.0589	3.8910E-03	.0712	4.3447E-03	.0795	.4000	-0
55	552	13.942	2.750	3.627E-03	.0664	4.3848E-03	.0802	4.8965E-03	.0896	.4000	-.321
56	554	19.283	3.805	5.026E-03	.0920	6.0779E-03	.1112	6.7885E-03	.1242	.4000	-.526
57	553	19.563	3.431	4.528E-03	.0829	5.4754E-03	.1002	6.1149E-03	.1119	.4000	-.951
58	545	11.692	2.106	2.751E-03	.0503	3.3198E-03	.0607	3.7023E-03	.0677	.4000	-1.000
59	539	5.092	.969	1.256E-03	.0230	1.5131E-03	.0277	1.6855E-03	.0308	.4000	1.000
60	534	2.166	.388	4.990E-04	.0091	6.0026E-04	.0110	6.6805E-04	.0122	.4000	.906
61	533	.912	.163	2.098E-04	.0038	2.5232E-04	.0046	2.8077E-04	.0051	.4000	.750
62	533	1.166	.183	2.355E-04	.0043	2.8320E-04	.0052	3.1512E-04	.0058	.4000	0
63	539	10.869	1.957	2.536E-03	.0464	3.0557E-03	.0559	3.4040E-03	.0623	.4500	-1.000
64	536	4.781	.960	1.236E-03	.0226	1.4872E-03	.0272	1.6553E-03	.0303	.4500	1.000
65	529	2.318	.426	5.454E-04	.0100	6.5528E-04	.0120	7.2868E-04	.0133	.4500	.990
66	546	11.455	2.127	2.782E-03	.0509	3.3576E-03	.0614	3.7450E-03	.0685	.5000	-0
67	547	12.461	2.383	3.120E-03	.0571	3.7870E-03	.0689	4.2024E-03	.0769	.5000	-.277
68	548	15.402	3.031	3.976E-03	.0727	4.8011E-03	.0878	5.3571E-03	.0980	.5000	-.553
69	541	19.998	3.723	4.901E-03	.0897	5.9236E-03	.1084	6.6132E-03	.1210	.5000	-.830
70	549	20.159	3.859	5.066E-03	.0927	6.1190E-03	.1120	6.8286E-03	.1249	.5000	-1.000
72	513	4.900	.983	1.264E-03	.0231	1.5202E-03	.0278	1.6916E-03	.0310	.5000	1.000
73	528	1.429	.263	3.355E-04	.0061	4.0301E-04	.0074	4.4808E-04	.0082	.5000	.886
74	527	.554	.099	1.260E-04	.0023	1.5132E-04	.0028	1.6820E-04	.0031	.5000	.640
75	527	1.343	.239	3.053E-04	.0056	3.6662E-04	.0067	4.0752E-04	.0075	.5000	0
76	546	11.938	1.956	2.559E-03	.0468	3.0882E-03	.0565	3.4447E-03	.0630	.5500	-0
77	529	2.295	.360	4.609E-04	.0084	5.5319E-04	.0101	6.1514E-04	.0113	.5500	-1.000
78	530	3.697	.560	7.182E-04	.0131	8.6325E-04	.0158	9.6018E-04	.0176	.5500	1.000
79	527	1.542	.283	3.619E-04	.0066	4.3411E-04	.0079	4.8256E-04	.0088	.5500	.935
80	541	11.187	2.132	2.771E-03	.0507	3.3406E-03	.0611	3.7228E-03	.0681	.6000	-0
81	542	10.352	2.143	2.786E-03	.0510	3.3587E-03	.0615	3.7432E-03	.0685	.6000	-.249
83	549	17.808	3.507	4.607E-03	.0843	5.5648E-03	.1018	6.2107E-03	.1136	.6000	-.748
84	526	.291	.058	7.406E-05	.0014	8.8914E-05	.0016	9.8824E-05	.0018	.6000	-1.000
85	531	3.903	.697	8.942E-04	.0164	1.0748E-03	.0197	1.1956E-03	.0219	.6000	1.000
86	528	1.233	.233	2.979E-04	.0055	3.5782E-04	.0065	3.9781E-04	.0073	.6000	.907
87	525	1.378	.238	3.032E-04	.0055	3.6394E-04	.0067	4.0446E-04	.0074	.6000	0
88	541	9.525	1.712	2.224E-03	.0407	2.6801E-03	.0490	2.9865E-03	.0546	.6500	-0
89	546	9.117	1.690	2.203E-03	.0403	2.6575E-03	.0486	2.9627E-03	.0542	.7000	-0
90	540	9.114	1.790	2.336E-03	.0427	2.8181E-03	.0516	3.1423E-03	.0575	.7000	-.235
91	546	9.730	1.912	2.500E-03	.0457	3.0165E-03	.0552	3.3643E-03	.0616	.7000	-.669
92	551	11.930	2.221	2.924E-03	.0535	3.5342E-03	.0647	3.9457E-03	.0722	.7000	-.704
93	551	11.865	2.403	3.161E-03	.0578	3.8194E-03	.0699	4.2636E-03	.0780	.7000	-.848
94	532	.748	.162	2.081E-04	.0038	2.5019E-04	.0046	2.7835E-04	.0051	.7000	1.000
95	532	2.528	.452	5.804E-04	.0106	6.9781E-04	.0128	7.7635E-04	.0142	.7000	.988
96	528	1.049	.187	2.393E-04	.0044	2.8749E-04	.0053	3.1966E-04	.0058	.7000	0
97	548	7.805	1.451	1.902E-03	.0348	2.2974E-03	.0420	2.5634E-03	.0469	.7500	-0
98	550	8.531	1.494	1.964E-03	.0359	2.3735E-03	.0434	2.6494E-03	.0485	.8000	-0

GROUP
101

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
37	7	AAM=UMU	8.00	553.9	1311	29.86	12.14	-42.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF ($LUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FR (M= .009FT)	SIFR (M= .009FT)	SWITCH POSITION
95.0	.057	2.542	4821	5.810E-05	7.049E-08	2.80E 06	9.460E-02	3.594E-02	2

TC NO	TW	DTWDT	W-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF	X/L	Y/YMAX
										FUSELAGE	
99	547	7.819	1.506	1.972E-03	.0381	2.3799E-03	.0435	2.6549E-03	.0486	.8000	-.223
100	547	8.663	1.542	2.018E-03	.0389	2.4359E-03	.0445	2.7174E-03	.0497	.8000	-.446
101	550	9.014	1.875	2.464E-03	.0451	2.9767E-03	.0544	3.3226E-03	.0608	.8000	-.669
102	553	9.391	1.956	2.580E-03	.0472	3.1193E-03	.0570	3.4835E-03	.0637	.8000	-.806
103	549	6.017	1.196	1.569E-03	.0287	1.8944E-03	.0346	2.1138E-03	.0387	.8500	-0
104	550	6.029	1.088	1.429E-03	.0261	1.7264E-03	.0316	1.9267E-03	.0352	.9000	-0
105	548	9.829	1.147	1.502E-03	.0275	1.8134E-03	.0332	2.0231E-03	.0370	.9000	-.226
106	546	6.318	1.242	1.622E-03	.0297	1.9574E-03	.0358	2.1831E-03	.0399	.9000	-.452
107	551	7.124	1.287	1.694E-03	.0310	2.0470E-03	.0374	2.2852E-03	.0418	.9000	-.678
108	551	6.392	1.198	1.564E-03	.0286	1.8903E-03	.0346	2.1101E-03	.0386	.9000	-.817
109	539	.387	.072	9.305E-05	.0017	1.1208E-04	.0020	1.2484E-04	.0023	.9000	1.000
110	537	.883	.150	2.046E-04	.0037	2.4638E-04	.0045	2.7438E-04	.0050	.9000	.884
111	537	.458	.081	1.049E-04	.0019	1.2624E-04	.0023	1.4056E-04	.0026	.9000	.618
112	552	4.825	.925	1.218E-03	.0223	1.4728E-03	.0269	1.6445E-03	.0301	.9500	-0
114	551	7.263	1.392	1.831E-03	.0336	2.2126E-03	.0405	2.4708E-03	.0452	.9900	-0
115	554	6.749	1.333	1.758E-03	.0322	2.1259E-03	.0389	2.3744E-03	.0434	.9900	-.253
116	543	6.406	1.264	1.668E-03	.0305	2.0173E-03	.0369	2.2530E-03	.0412	.9900	-.507
117	552	5.951	1.173	1.548E-03	.0283	1.8679E-03	.0342	2.0855E-03	.0381	.9900	-.660
118	552	5.447	.984	1.298E-03	.0237	1.5671E-03	.0287	1.7497E-03	.0320	.9900	-.793
119	538	1.297	.254	3.285E-04	.0060	3.9556E-04	.0072	4.4056E-04	.0081	.9900	.780
120	532	1.146	.130	1.674E-04	.0031	2.0132E-04	.0037	2.2398E-04	.0041	.9900	.305
										LOWER WING SURFACE	
										X/C	Y/S
121	545	27.253	5.259	7.044E-03	.1288	8.5449E-03	.1563	9.5036E-03	.1749	0	.050
122	576	36.645	8.299	8.571E-03	.1568	1.0432E-02	.1908	1.1703E-02	.2140	0	.100
124	559	13.846	2.512	3.342E-03	.0611	4.0485E-03	.0740	4.5267E-03	.0828	.2000	.100
126	551	6.251	1.041	1.397E-03	.0255	1.6881E-03	.0309	1.8847E-03	.0345	.6000	.100
127	551	6.988	1.262	1.661E-03	.0304	2.0074E-03	.0367	2.2410E-03	.0410	.7000	.100
128	551	8.367	1.149	1.507E-03	.0276	1.8214E-03	.0333	2.0334E-03	.0372	.9000	.100
134	576	46.319	9.502	1.292E-02	.2363	1.5727E-02	.2876	1.7642E-02	.3226	0	.150
135	574	44.990	8.225	1.116E-02	.2041	1.3579E-02	.2483	1.5227E-02	.2785	0	.250
136	572	29.348	5.358	7.246E-03	.1325	8.8075E-03	.1611	9.8712E-03	.1805	.1000	.250
137	565	18.624	3.184	4.267E-03	.0780	5.1771E-03	.0947	5.7969E-03	.1060	.2000	.250
138	559	11.511	2.152	2.862E-03	.0523	3.4667E-03	.0634	3.8761E-03	.0709	.4000	.250
140	556	9.285	1.631	2.160E-03	.0395	2.6145E-03	.0478	2.9216E-03	.0534	.6000	.250
142	549	6.850	1.125	1.470E-03	.0270	1.7828E-03	.0326	1.9894E-03	.0364	.9000	.250
147	581	40.365	7.630	1.045E-02	.1912	1.2745E-02	.2331	1.4312E-02	.2617	0	.450
148	576	31.875	5.833	7.939E-03	.1452	9.6627E-03	.1767	1.0840E-02	.1982	.1000	.450
149	583	42.109	7.964	1.093E-02	.2000	1.3334E-02	.2439	1.4978E-02	.2739	0	.500
150	578	30.525	6.091	8.277E-03	.1514	1.0071E-02	.1842	1.1296E-02	.2066	.1000	.500
151	565	20.814	4.132	5.541E-03	.1013	6.7230E-03	.1230	7.5256E-03	.1376	.2000	.500
152	564	15.888	2.803	3.754E-03	.0686	4.5532E-03	.0833	5.0959E-03	.0932	.4000	.500
154	558	10.721	1.944	2.579E-03	.0472	3.1225E-03	.0571	3.4900E-03	.0638	.6000	.500
156	554	8.746	1.391	1.837E-03	.0336	2.2215E-03	.0406	2.4814E-03	.0454	.8000	.500
157	547	6.450	1.163	1.522E-03	.0278	1.8379E-03	.0336	2.0503E-03	.0375	.9000	.500
163	577	43.317	8.169	1.112E-02	.2034	1.3537E-02	.2476	1.5187E-02	.2778	0	.550
164	576	36.745	6.549	8.907E-03	.1629	1.0839E-02	.1982	1.2158E-02	.2224	.1000	.550
165	582	40.484	7.655	1.050E-02	.1920	1.2803E-02	.2341	1.4379E-02	.2630	0	.600
166	579	35.782	6.556	8.951E-03	.1637	1.0903E-02	.1994	1.2237E-02	.2238	.1000	.600
167	577	40.300	7.379	1.006E-02	.1839	1.2244E-02	.2239	1.3738E-02	.2512	0	.650
168	575	32.169	6.418	8.719E-03	.1595	1.0609E-02	.1940	1.1898E-02	.2176	.1000	.650
169	575	39.818	7.229	9.829E-03	.1797	1.1959E-02	.2186	1.3409E-02	.2452	0	.700
170	557	20.071	3.638	4.826E-03	.0883	5.8422E-03	.1068	6.5296E-03	.1194	.1000	.700
171	584	42.891	7.879	1.084E-02	.1982	1.3219E-02	.2418	1.4853E-02	.2716	0	.750
172	579	38.495	6.842	9.351E-03	.1710	1.1392E-02	.2084	1.2788E-02	.2339	.1000	.750
173	567	23.392	4.390	5.898E-03	.1079	7.1590E-03	.1309	8.0160E-03	.1466	.2000	.750
175	560	16.309	3.320	4.422E-03	.0809	5.3578E-03	.0980	5.9417E-03	.1096	.4000	.750
176	545	3.460	.661	8.622E-04	.0158	1.0402E-03	.0190	1.1599E-03	.0212	.7000	.750
178	551	8.920	1.611	2.119E-03	.0388	2.5610E-03	.0468	2.8589E-03	.0523	.8000	.750
183	558	17.722	2.532	3.365E-03	.0615	4.0744E-03	.0745	4.5548E-03	.0833	0	.900
184	561	18.518	3.364	4.487E-03	.0821	5.4375E-03	.0994	6.0821E-03	.1112	.2000	.900
185	556	12.036	2.180	2.887E-03	.0528	3.4941E-03	.0639	3.9043E-03	.0714	.6000	.900
186	549	8.835	1.595	2.094E-03	.0383	2.5290E-03	.0463	2.8224E-03	.0516	.8000	.900
										UPPER WING SURFACE	
										X/C	Y/S
129	538	1.233	.188	2.427E-04	.0044	2.9219E-04	.0053	3.2541E-04	.0060	.1000	.100
130	539	.346	.058	7.559E-05	.0014	9.1044E-05	.0017	1.0141E-04	.0019	.2000	.100
131	540	.310	.057	7.435E-05	.0014	8.9572E-05	.0016	9.9785E-05	.0018	.4000	.100
132	539	.132	.025	3.246E-05	.0006	3.9097E-05	.0007	4.3551E-05	.0008	.7000	.100
133	537	.195	.034	4.377E-05	.0008	5.2693E-05	.0010	5.8670E-05	.0011	.9000	.100
143	541	2.020	.407	5.281E-04	.0097	6.3642E-04	.0116	7.0913E-04	.0130	.1000	.250
145	541	.324	.059	7.106E-05	.0013	8.5634E-05	.0016	9.5420E-05	.0017	.4000	.250
146	537	.423	.073	9.486E-05	.0017	1.1419E-04	.0021	1.2715E-04	.0023	.9000	.250
158	562	2.156	.329	4.275E-04	.0078	5.1532E-04	.0094	5.7432E-04	.0105	.1000	.500
159	562	1.418	.232	3.010E-04	.0055	3.6357E-04	.0066	4.0522E-04	.0074	.2000	.500
160	562	.587	.096	1.248E-04	.0023	1.5041E-04	.0028	1.6764E-04	.0031	.4000	.500
161	538	.211	.037	4.752E-05	.0009	5.7225E-05	.0010	6.3734E-05	.0012	.8000	.500
162	535	1.068	.145	1.868E-04	.0034	2.2479E-04	.0041	2.5023E-04	.0046	.9000	.500
179	562	3.458	.622	8.089E-04	.0148	9.7466E-04	.0178	1.0863E-03	.0199	.1000	.750
180	541	1.437	.257	3.341E-04	.0061	4.0265E-04	.0074	4.4867E-04	.0082	.2000	.750
181	540	.663	.083	1.077E-04	.0020	1.2977E-04	.0024	1.4458E-04	.0026	.4000	.750
182	536	.421	.071	9.141E-05	.0017	1.1001E-04	.0020	1.2248E-04	.0022	.8000	.750
										VERTICAL STABILIZER	
										X/C	Z/S
187	537	2.383	.388	5.018E-04	.0092	6.0409E-04	.0110	6.7265E-04	.0123	0	.100
188	533	1.372	.238	3.057E-04	.0056	3.6761E-04	.0067	4.0903E-04	.0075	.1000	.100
189	529	.297	.050	6.383E-05	.0012	7.6688E-05	.0014	8.5281E-05	.0016	.4000	.100
191	529	.265	.050	6.414E-05	.0012	7.7060E-05	.0014	8.5693E-05	.0016	.8000	.100
192	535	2.226	.423	5.445E-04	.0100	6.5518E-04	.0120	7.2928E-04	.0133	0	.250
193	532	1.512	.262	3.369E-04	.0062	4.0483E-04	.0074	4.5006E-04	.0082	.1000	.250
194	530	.274	.046	5.919E-05	.0011	7.1126E-05	.0013	7.9102E-05	.0014	.4000	.250
195	529	.394	.070	8.988E-05	.0016	1.0796E-04	.0020	1.2005E-04	.0022	.8000	.250
197	532	1.868	.350	4.486E-04	.0082	5.3939E-04	.0099	6.0009E-04	.0110	.1000	.500
198	531	.576	.103	1.328E-04	.0024	1.5871E-04	.0029	1.7655E-04	.0032	.4000	.500
200	529	.497	.089	1.135E-04	.0021	1.3630E-04	.0025	1.5186E-04	.0028	.8000	.500
201	536	3.806	.723	9.335E-04	.0171	1.1236E-03	.0205	1.2509E-03	.0229	0	.750
202	533	3.822	.438	5.587E-04	.0102	6.7189E-04	.0123	7.4759E-04	.0137	.1000	.750
203	530	.749	.085	1.089E-04	.0020	1.3089E-04	.0024	1.4556E-04	.0027	.4000	.750
204	530	1.102	.131	1.680E-04	.0031	2.0190E-04	.0037	2.2455E-04	.0041	.8000	.750

GROUP
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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PHEBEND	ROLL-MODEL	YAW
38	7	KAR-DRO	8.00	550.9	1307	19.87	2.13	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RHEF-FM (M= .009FT)	SIEM (M= .009FT)	SWITCH POSITION
94.7	.056	2.52M	5M16	4.997E-05	7.0[illegible]E-08	2.50E 06	9.480E-02	9.390E-02	1

TC NO	TB	U-INCI	U-DOT	M(TO)	M(TO)/MREF	M(.9TO)	M(.9TO)/MREF	M(.85TO)	M(.85TO)/MREF	FUSELAGE A/L	FUSELAGE Y/YMAX
1	608	170.334	31.639	9.522E-02	.8297	9.561[illegible]E-02	1.0704	6.283ME-02	1.1529	0	0
2	570	101.502	18.932	2.282E-02	.4187	2.[illegible]736E-02	.9089	3.1084E-02	.5703	.0100	-0
3	556	57.511	9.193	1.217E-02	.2434	1.[illegible]16E-02	.2704	1.6470E-02	.3022	.0100	-.441
4	543	19.819	3.024	3.958E-03	.0726	4.[illegible]74E-03	.0876	5.3245E-03	.0977	.0100	-1.000
5	538	4.823	.697	9.063E-04	.0166	1.[illegible]19E-03	.0200	1.2164E-03	.0223	.0100	0
6	564	71.264	12.174	1.437E-02	.3003	1.[illegible]56E-02	.3443	7.2226E-02	.4078	.0200	-0
7	559	58.362	10.490	1.418E-02	.2947	1.[illegible]3[illegible]E-02	.3147	1.9184E-02	.3520	.0300	-0
8	553	47.948	8.408	1.119E-02	.2346	1.[illegible]4M7E-02	.2479	1.5067E-02	.2764	.0300	-.303
9	543	19.782	2.690	3.606P-03	.0036	4.[illegible]M10E-03	.0747	4.6618E-03	.0855	.0300	-1.000
10	538	3.100	.546	7.223E-04	.0153	8.[illegible]002E-04	.0160	9.6715E-04	.0178	.0300	0
11	565	47.904	9.459	1.256E-02	.2305	1.[illegible]205E-02	.2790	1.6[illegible]90E-02	.3117	.0400	-0
12	549	31.278	6.552	8.638E-03	.1585	1.[illegible]43BE-02	.1919	1.1[illegible]91E-02	.2138	.0500	-0
13	549	31.351	6.171	8.117E-03	.1492	9.[illegible]8245E-03	.1803	1.0966E-02	.2012	.0500	-.310
14	545	15.475	2.702	3.544E-03	.0650	4.[illegible]773E-03	.0745	4.[illegible]710E-03	.0875	.0500	-1.000
15	538	2.421	.500	6.494E-04	.0119	7.[illegible]829E-04	.0144	8.[illegible]742E-04	.0160	.0500	0
16	560	28.977	5.647	4.815E-03	.0883	5.[illegible]195E-03	.1068	6.[illegible]47JE-03	.1192	.0800	-0
17	547	20.740	3.911	4.815E-03	.0847	5.[illegible]722E-03	.1027	6.[illegible]717E-03	.1141	.0800	-.380
18	543	9.764	1.650	2.160E-03	.0396	2.[illegible]061E-03	.0478	2.[illegible]061E-03	.0533	.0800	-1.000
19	546	14.640	2.718	3.568E-03	.0655	4.[illegible]076E-03	.0790	4.[illegible]55E-03	.0882	.1000	-0
20	549	20.259	3.554	4.048E-03	.0876	4.[illegible]747E-03	.0454	2.[illegible]62JE-03	.0507	.1000	-.383
21	549	14.203	2.658	3.504F-03	.0643	4.[illegible]33BE-03	.0777	4.[illegible]75E-03	.0867	.1000	-.817
22	543	9.370	1.146	1.500E-03	.0275	1.[illegible]809E-03	.0332	2.[illegible]82E-03	.0370	.1000	-1.000
23	540	1.714	.308	4.014E-04	.0074	4.[illegible]83JE-04	.0089	5.[illegible]24E-04	.0099	.1000	.783
24	542	2.575	.491	6.409E-04	.0118	7.[illegible]48E-04	.0142	8.[illegible]56E-04	.0158	.1000	0
25	547	14.560	2.938	3.862E-03	.0709	4.[illegible]633E-03	.0896	5.[illegible]03E-03	.0955	.1500	-.893
26	540	8.907	1.255	1.630E-03	.0300	1.[illegible]714E-03	.0362	2.[illegible]70E-03	.0403	.1500	-1.000
27	538	1.045	.199	2.543E-04	.0047	3.[illegible]11E-04	.0057	3.[illegible]56E-04	.0064	.1500	.604
28	541	4.947	.781	1.019F-03	.0187	1.[illegible]22E-03	.0225	1.[illegible]1E-03	.0251	.1500	0
29	543	11.219	2.019	2.641F-03	.0485	3.[illegible]46E-03	.0585	3.[illegible]53E-03	.0652	.2000	-0
30	545	14.599	2.668	3.762F-03	.0690	4.[illegible]402E-03	.0833	5.[illegible]3E-03	.0929	.2000	-.278
31	544	17.167	3.555	4.463E-03	.0856	5.[illegible]271E-03	.1032	6.[illegible]79E-03	.1151	.2000	-.486
32	545	13.952	2.741	3.596F-03	.0660	4.[illegible]402E-03	.0796	4.[illegible]3JE-03	.0888	.2000	-.792
33	542	7.325	1.317	1.719E-03	.0315	2.[illegible]073E-03	.0380	2.[illegible]14E-03	.0424	.2000	-1.000
34	538	.799	.152	1.977E-04	.0036	2.[illegible]M1E-04	.0044	2.[illegible]26E-04	.0049	.2000	.888
35	541	5.080	.914	1.192E-03	.0219	1.[illegible]77E-03	.0264	1.[illegible]5E-03	.0294	.2000	0
36	548	15.884	2.869	3.628F-03	.0629	4.[illegible]40JE-03	.0760	4.[illegible]07E-03	.0848	.2100	0
37	547	14.400	2.596	3.413F-03	.0626	4.[illegible]21JE-03	.0756	4.[illegible]94E-03	.0844	.2200	0
38	547	13.202	2.[illegible]	2.750E-03	.0505	3.[illegible]21BE-03	.0609	3.[illegible]57E-03	.0680	.2300	0
39	540	3.149	.617	8.045E-04	.0148	9.[illegible]94E-04	.0178	1.[illegible]9E-03	.0198	.2400	.486
40	541	4.601	.726	9.476E-04	.0174	1.[illegible]24E-03	.0210	1.[illegible]3E-03	.0234	.2500	0
41	539	.934	.184	2.457E-04	.0045	2.[illegible]60E-04	.0054	3.[illegible]2E-04	.0061	.2700	.465
42	540	1.760	.360	4.696E-04	.0086	5.[illegible]6E-04	.0104	6.[illegible]8E-04	.0116	.2700	.465
43	540	1.706	.260	3.390E-04	.0062	4.[illegible]6E-04	.0075	4.[illegible]5E-04	.0084	.2700	0
44	546	8.554	1.694	1.961E-03	.0360	2.[illegible]67E-03	.0434	2.[illegible]1E-03	.0485	.3000	-0
45	546	10.837	2.012	2.641F-03	.0485	3.[illegible]8E-03	.0585	3.[illegible]2E-03	.0653	.3000	-.312
46	548	15.933	3.310	4.359E-03	.0800	5.[illegible]65E-03	.0966	5.[illegible]1E-03	.1078	.3000	-.504
47	548	13.014	1.920	2.526F-03	.0464	3.[illegible]51E-03	.0560	3.[illegible]5E-03	.0625	.3000	-.857
48	544	7.914	1.338	1.754L-03	.0322	2.[illegible]16E-03	.0388	2.[illegible]9E-03	.0433	.3000	-1.000
49	540	2.622	.514	6.699E-04	.0123	8.[illegible]75E-04	.0148	9.[illegible]E-04	.0165	.3000	.983
50	540	1.[illegible]	.[illegible]	3.[illegible]11E-04	.0057	3.[illegible]49E-04	.0069	4.[illegible]8E-04	.0077	.3000	.853
51	540	.772	.160	2.078E-04	.0038	2.[illegible]04E-04	.0046	2.[illegible]4E-04	.0051	.3000	.433
52	540	.831	.172	2.239F-04	.0041	2.[illegible]91E-04	.0050	3.[illegible]0E-04	.0055	.3000	.361
53	540	.734	.124	1.612F-04	.0030	1.[illegible]43E-04	.0036	2.[illegible]8E-04	.0040	.3000	0
54	545	6.549	1.287	1.695E-03	.0310	2.[illegible]3M4E-03	.0374	2.[illegible]3E-03	.0417	.4000	-0
55	546	8.414	1.654	2.172F-03	.0398	2.[illegible]17E-03	.0481	2.[illegible]4E-03	.0537	.4000	-.321
56	548	12.963	2.546	3.351E-03	.0615	4.[illegible]476E-03	.0743	4.[illegible]7E-03	.0829	.4000	-.526
57	548	18.514	3.238	4.263F-03	.0782	5.[illegible]4M8E-03	.0945	5.[illegible]6E-03	.1054	.4000	-.951
58	545	10.446	1.[illegible]	2.469F-03	.0453	2.[illegible]02E-03	.0547	3.[illegible]5E-03	.0610	.4000	-1.000
59	543	4.920	.938	1.227F-03	.0225	1.[illegible]79BE-03	.0272	1.[illegible]9E-03	.0303	.4000	1.000
60	541	2.523	.453	5.912E-04	.0108	7.[illegible]27E-04	.0131	7.[illegible]3E-04	.0146	.4000	.906
61	540	.944	.170	2.210F-04	.0041	2.[illegible]63E-04	.0049	2.[illegible]8E-04	.0054	.4000	.750
62	542	1.[illegible]	.304	3.971F-04	.0073	4.[illegible]8E-04	.0088	5.[illegible]1E-04	.0098	.4000	0
63	545	10.727	1.932	2.534E-03	.0465	3.[illegible]58E-03	.0561	3.[illegible]6E-03	.0626	.4500	-1.000
64	543	4.873	.983	1.245F-03	.0236	1.[illegible]48E-03	.0284	1.[illegible]8E-03	.0317	.4500	1.000
65	541	2.409	.446	5.813F-04	.0107	7.[illegible]83E-04	.0129	7.[illegible]0E-04	.0143	.4500	.940
66	547	6.034	1.121	1.473F-03	.0270	1.[illegible]79E-03	.0326	1.[illegible]1E-03	.0364	.5000	-0
67	547	7.117	1.361	1.791F-03	.0329	2.[illegible]62E-03	.0397	2.[illegible]3E-03	.0443	.5000	-.277
68	547	9.859	1.939	2.551E-03	.0468	3.[illegible]09E-03	.0565	3.[illegible]8E-03	.0631	.5000	-.553
69	550	15.018	2.795	3.692F-03	.0677	4.[illegible]62JE-03	.0819	4.[illegible]25E-03	.0914	.5000	-.830
70	549	18.639	3.568	4.706F-03	.0863	5.[illegible]70E-03	.1043	6.[illegible]5E-03	.1165	.5000	-1.000
71	543	4.480	.904	1.142F-03	.0217	1.[illegible]60E-03	.0262	1.[illegible]0E-03	.0292	.5000	1.000
72	541	1.802	.334	4.350E-04	.0080	5.[illegible]44E-04	.0096	5.[illegible]3E-04	.0107	.5000	.886
73	540	.654	.118	1.536E-04	.0028	1.[illegible]1E-04	.0034	2.[illegible]0E-04	.0038	.5000	.640
74	542	2.102	.378	4.938F-04	.0091	6.[illegible]55E-04	.0109	6.[illegible]3E-04	.0122	.5000	0
75	549	6.167	1.012	1.434F-03	.0245	1.[illegible]12E-03	.0298	1.[illegible]9E-03	.0330	.5500	-0
76	540	2.501	.395	5.144E-04	.0094	6.[illegible]01E-04	.0114	6.[illegible]6E-04	.0127	.5500	-1.000
77	541	3.710	.566	7.387F-04	.0136	8.[illegible]06E-04	.0163	9.[illegible]7E-04	.0182	.5500	1.000
78	539	1.582	.293	3.806F-04	.0070	4.[illegible]56E-04	.0084	5.[illegible]2E-04	.0094	.5500	.935
79	539	1.582	.293	3.806F-04	.0070	4.[illegible]56E-04	.0084	5.[illegible]2E-04	.0094	.5500	.935
80	546	5.833	1.114	1.463F-03	.0268	1.[illegible]66E-03	.0324	1.[illegible]0E-03	.0361	.6000	-0
81	546	6.408	1.330	1.746E-03	.0320	2.[illegible]08E-03	.0387	2.[illegible]8E-03	.0431	.6000	-.249
82	549	13.184	2.596	3.424F-03	.0628	4.[illegible]37E-03	.0799	4.[illegible]4E-03	.0847	.6000	-.748
83	530	.480	.096	1.238F-04	.0023	1.[illegible]8E-04	.0027	1.[illegible]6E-04	.0030	.6000	-1.000
84	540	2.143	.385	5.014E-04	.0092	6.[illegible]1E-04	.0111	6.[illegible]5E-04	.0124	.6000	1.000
85	538	1.131	.219	2.799E-04	.0051	3.[illegible]72E-04	.0062	3.[illegible]6E-04	.0069	.6000	.907
86	539	2.159	.376	4.891E-04	.0090	5.[illegible]34E-04	.0108	6.[illegible]6E-04	.0120	.6000	0
87	547	4.815	.868	1.141F-03	.0209	1.[illegible]78E-03	.0253	1.[illegible]8E-03	.0282	.6500	-0
88	546	4.309	.800	1.051F-03	.0193	1.[illegible]69E-03	.0233	1.[illegible]6E-03	.0260	.7000	-0
89	546	5.184	1.019	1.339F-03	.0246	1.[illegible]49E-03	.0297	1.[illegible]3E-03	.0331	.7000	-.245
90	546	6.201	1.219	1.601F-03	.0294	1.[illegible]26E-03	.0355	2.[illegible]E-03	.0396	.7000	-.469
91	548	8.172	1.619	2.001F-03	.0367	2.[illegible]40E-03	.0444	2.[illegible]8E-03	.0495	.7000	-.704
92	547	8.846	1.788	2.351E-03	.0431	2.[illegible]38E-03	.0521	3.[illegible]6E-03	.0581	.7000	-.848
93	539	2.174	.473	6.158F-04	.0113	7.[illegible]06E-04	.0136	8.[illegible]8E-04	.0152	.7000	1.000
94	537	1.732	.310	4.028E-04	.0074	4.[illegible]51E-04	.0089	5.[illegible]3E-04	.0099	.7000	.908
95	537	1.726	.309	4.017E-04	.0074	4.[illegible]76E-04	.0089	5.[illegible]8E-04	.0099	.7000	0
96	547	4.423	.822	1.080E-03	.0198	1.[illegible]04E-03	.0239	1.[illegible]5E-03	.0267	.7500	-0
97	546	4.148	.725	9.523E-04	.0175	1.[illegible]49E-03	.0211	1.[illegible]8E-03	.0235	.8000	-0

GROUP
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NOT REPRODUCIBLE

365974

AEDC(AMO)INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VT1167

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREVEND	ROLL-MODEL	YAW
38	7	KAM-UNO	4.00	554.4	1304	20.00	2.00	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RHEF-FT (MM .009FT)	SIPM (MM .009FT)	SWITCH POSITION
94.8	.057	2.944	3816	5.042HE-05	7.092E-08	2.92E 06	5.40HE-02	3.98?E-02	2

TC NO	TW	D1=D1	Q-D01	M(TO)	M(TO)/MREF	M(.9TO)	M(.9TO)/MREF	M(.8STO)	M(.8STO)/MREF
						FUSELAGE			
								A/L	Y/YMAX
99	541	5.017	.946	1.247E-03	.0424	1.5012E-03	.0275	1.6754E-03	.0306	.8000	-.223
100	541	5.065	1.044	1.414E-03	.0259	1.7051E-03	.0312	1.9006E-03	.0348	.8000	-.446
101	545	6.021	1.268	1.636E-03	.0299	1.9768E-03	.0361	2.2026E-03	.0403	.8000	-.669
102	546	6.156	1.277	1.676E-03	.0307	2.0232E-03	.0370	2.2570E-03	.0413	.8000	-.806
103	542	3.247	.647	8.452E-04	.0155	1.0194E-03	.0186	1.1365E-03	.0208	.8500	-0
104	541	2.647	.484	5.271E-04	.0096	6.3550E-04	.0116	7.0838E-04	.0130	.9000	-0
105	540	3.232	.633	8.256E-04	.0151	9.9570E-04	.0182	1.1091E-03	.0203	.9000	-.226
106	540	3.546	.698	9.044E-04	.0165	1.0903E-03	.0199	1.2150E-03	.0222	.9000	-.452
107	542	4.367	.785	1.025E-03	.0188	1.2364E-03	.0226	1.3785E-03	.0252	.9000	-.678
108	542	4.134	.768	1.000E-03	.0183	1.2064E-03	.0221	1.3444E-03	.0246	.9000	-.817
109	537	.820	.169	2.139E-04	.0039	2.5763E-04	.0047	2.8696E-04	.0052	.9000	1.000
110	535	.472	.175	2.267E-04	.0041	2.7292E-04	.0050	3.0387E-04	.0056	.9000	.884
111	534	.501	.082	1.059E-04	.0019	1.2690E-04	.0023	1.4128E-04	.0026	.9000	.610
112	541	2.460	.459	5.948E-04	.0109	7.1672E-04	.0132	7.9843E-04	.0147	.9500	-0
114	540	4.056	.773	1.007E-03	.0184	1.2133E-03	.0222	1.3522E-03	.0247	.9900	-0
115	542	3.867	.723	9.343E-04	.0171	1.1251E-03	.0206	1.2536E-03	.0232	.9900	-.253
116	541	3.741	.733	9.473E-04	.0175	1.1363E-03	.0211	1.2867E-03	.0235	.9900	-.507
117	541	3.627	.711	9.277E-04	.0170	1.1149E-03	.0204	1.2468E-03	.0228	.9900	-.660
118	541	3.725	.670	8.739E-04	.0160	1.0537E-03	.0193	1.1748E-03	.0215	.9900	-.793
119	534	.926	.191	2.467E-04	.0045	2.9849E-04	.0054	3.3054E-04	.0060	.9900	.780
120	541	.694	.079	1.016E-04	.0019	1.2218E-04	.0022	1.3594E-04	.0025	.9900	.305
								LOWER WING SURFACE	
								A/C	Y/S
121	546	19.874	7.662	1.020F-02	.1885	1.2364E-02	.2294	1.3803E-02	.2524	0	.050
122	545	48.880	8.358	1.125F-02	.2058	1.3645E-02	.2497	1.5289E-02	.2796	0	.100
124	552	12.039	2.176	2.800E-03	.0347	3.4828E-03	.0637	3.8899E-03	.0711	.2000	.100
126	543	5.425	.917	1.199F-03	.0219	1.4449E-03	.0265	1.6134E-03	.0295	.6000	.100
127	542	4.736	.851	1.112E-03	.0203	1.3407E-03	.0245	1.4965E-03	.0273	.7000	.100
128	540	5.050	.892	9.015E-04	.0165	1.0865E-03	.0199	1.2108E-03	.0221	.9000	.100
134	565	46.830	11.594	1.561F-02	.2855	1.8944E-02	.3465	2.1209E-02	.3879	0	.150
135	563	52.232	9.693	1.274E-02	.2331	1.5456E-02	.2827	1.7297E-02	.3163	0	.250
136	553	22.457	4.062	5.318E-03	.0985	6.5120E-03	.1191	7.2746E-03	.1330	.1000	.250
137	553	14.422	2.650	3.246F-03	.0594	3.9258E-03	.0718	4.3852E-03	.0802	.2000	.250
138	549	9.342	1.737	2.291E-03	.0419	2.7882E-03	.0506	3.0902E-03	.0565	.4000	.250
140	547	6.311	1.143	1.491E-03	.0265	1.7525E-03	.0321	1.9556E-03	.0358	.6000	.250
142	541	3.948	.845	8.411E-04	.0156	1.0140E-03	.0185	1.1302E-03	.0207	.9000	.250
147	544	47.532	8.908	1.198F-02	.2191	1.4538E-02	.2659	1.6275E-02	.2976	0	.450
148	557	25.847	4.694	6.240E-03	.1141	7.5570E-03	.1382	8.4481E-03	.1545	.1000	.450
149	564	46.448	8.783	1.170F-02	.2140	1.4194E-02	.2596	1.5888E-02	.2906	0	.500
150	555	24.909	4.920	6.541E-03	.1196	7.9148E-03	.1448	8.8490E-03	.1618	.1000	.500
151	554	15.946	3.148	4.180F-03	.0764	5.0543E-03	.0925	5.6521E-03	.1034	.2000	.500
152	554	11.957	2.098	2.784E-03	.0509	3.3680E-03	.0616	3.7630E-03	.0688	.4000	.500
154	548	8.567	1.565	2.034E-03	.0372	2.4567E-03	.0449	2.7417E-03	.0501	.6000	.500
156	546	6.868	1.047	1.428E-03	.0261	1.7235E-03	.0315	1.9228E-03	.0352	.8000	.500
157	542	5.477	.985	1.285E-03	.0235	1.5501E-03	.0284	1.7280E-03	.0316	.9000	.500
163	558	44.795	8.369	1.117E-02	.2043	1.3529E-02	.2474	1.5128E-02	.2767	0	.550
164	558	29.264	5.468	7.295E-03	.1334	8.8374E-03	.1616	9.8817E-03	.1807	.1000	.550
165	564	45.614	8.568	1.149F-02	.2102	1.3947E-02	.2551	1.5612E-02	.2855	0	.600
166	559	31.858	5.781	7.726F-03	.1413	9.3630E-03	.1712	1.0472E-02	.1915	.1000	.600
167	562	45.568	8.272	1.110E-02	.2029	1.3456E-02	.2461	1.5057E-02	.2754	0	.650
168	559	29.249	5.749	7.734F-03	.1414	9.3714E-03	.1714	1.0481E-02	.1917	.1000	.650
169	564	48.089	8.744	1.175F-02	.2149	1.4257E-02	.2607	1.5958E-02	.2919	0	.700
170	549	14.912	2.691	3.654F-03	.0669	4.2865E-03	.0784	4.7844E-03	.0875	.1000	.700
171	566	52.567	9.569	1.290E-02	.2359	1.5658E-02	.2864	1.7534E-02	.3207	0	.750
172	558	37.101	6.523	8.702F-03	.1591	1.0560E-02	.1928	1.1785E-02	.2155	.1000	.750
173	563	17.362	3.235	4.285E-03	.0784	5.1836E-03	.0948	5.7901E-03	.1059	.2000	.750
175	551	10.048	2.038	2.688E-03	.0492	3.2487E-03	.0594	3.6273E-03	.0663	.4000	.750
176	544	1.994	.381	4.985E-04	.0091	6.0143E-04	.0110	6.7071E-04	.0123	.7000	.750
178	544	5.169	.930	1.218E-03	.0223	1.4701E-03	.0269	1.6395E-03	.0300	.8000	.750
183	554	22.868	3.259	4.321F-03	.0790	5.2280E-03	.0956	5.8406E-03	.1068	0	.900
184	552	18.059	3.264	4.320F-03	.0790	5.2244E-03	.0955	5.8350E-03	.1067	.2000	.900
185	546	10.764	1.940	2.567F-03	.0466	3.0756E-03	.0562	3.4313E-03	.0628	.6000	.900
186	544	8.561	1.541	2.018E-03	.0369	2.4344E-03	.0445	2.7148E-03	.0497	.8000	.900
								UPPER WING SURFACE	
								A/C	Y/S
129	541	2.483	.379	4.943E-04	.0090	5.9608E-04	.0109	6.6445E-04	.0122	.1000	.100
130	541	.694	.117	1.528F-04	.0028	1.8401E-04	.0034	2.0509E-04	.0038	.2000	.100
131	541	.742	.137	1.792F-04	.0033	2.1606E-04	.0040	2.4082E-04	.0044	.4000	.100
132	538	.669	.121	1.656F-04	.0030	1.9946E-04	.0036	2.2220E-04	.0041	.7000	.100
133	535	.224	.039	5.041F-05	.0009	6.0693E-05	.0011	6.7581E-05	.0012	.9000	.100
143	544	4.016	.810	1.061F-03	.0194	1.2802E-03	.0234	1.4276E-03	.0261	.1000	.250
145	542	.562	.095	1.238E-04	.0023	1.4934E-04	.0027	1.6647E-04	.0030	.4000	.250
146	537	.320	.056	7.207F-05	.0013	8.6878E-05	.0016	9.6859E-05	.0018	.9000	.250
158	545	4.083	.824	8.176E-04	.0150	9.8678E-04	.0180	1.1006E-03	.0201	.1000	.500
159	546	3.078	.504	6.614F-04	.0121	7.9838E-04	.0146	8.9001E-04	.0163	.2000	.500
160	545	1.758	.288	3.773E-04	.0069	4.5532E-04	.0083	5.0766E-04	.0093	.4000	.500
161	539	.371	.065	8.417E-05	.0015	1.0164E-04	.0019	1.1304E-04	.0021	.8000	.500
162	536	.685	.093	1.205E-04	.0022	1.4507E-04	.0027	1.6156E-04	.0030	.9000	.500
179	547	10.273	1.852	2.436E-03	.0446	2.9422E-03	.0538	3.2831E-03	.0600	.1000	.750
180	545	4.106	.739	9.641E-04	.0177	1.1695E-03	.0214	1.3044E-03	.0239	.2000	.750
181	544	1.906	.239	3.133E-04	.0057	3.7805E-04	.0069	4.2164E-04	.0077	.4000	.750
182	539	.763	.129	1.672F-04	.0031	2.0169E-04	.0037	2.2488E-04	.0041	.8000	.780
								VENTICAL STABILIZER	
								A/C	Z/S
187	539	6.711	1.095	1.425F-03	.0261	1.7176E-03	.0314	1.9134E-03	.0350	0	.100
188	532	2.061	.357	4.605F-04	.0084	5.5387E-04	.0101	6.1633E-04	.0113	.1000	.100
189	530	.602	.101	1.300E-04	.0024	1.5625E-04	.0029	1.7382E-04	.0032	.4000	.100
191	530	.524	.099	1.276E-04	.0023	1.5344E-04	.0028	1.7069E-04	.0031	.8000	.100
192	539	7.013	1.335	1.736E-03	.0318	2.0923E-03	.0383	2.3312E-03	.0426	0	.250
193	533	3.737	.648	8.369E-04	.0153	1.0068E-03	.0184	1.1206E-03	.0205	.1000	.250
194	531	.856	.110	1.417E-04	.0026	1.7042E-04	.0031	1.8960E-04	.0035	.4000	.250
195	530	.587	.103	1.325E-04	.0024	1.5925E-04	.0029	1.7716E-04	.0032	.8000	.250
197	537	9.176	1.695	2.194E-03	.0402	2.6487E-03	.0484	2.9501E-03	.0540	.1000	.500
198	534	1.105	.198	2.555E-04	.0047	3.0745E-04	.0056	3.4223E-04	.0063	.4000	.500
200	531	.823	.147	1.493E-04	.0035	2.2763E-04	.0042	2.5327E-04	.0046	.8000	.500
201	550	28.984	5.549	7.321E-03	.1339	8.8467E-03	.1618	9.8761E-03	.1806	0	.750
202	538	19.168	2.189	2.846E-03	.0520	3.4284E-03	.0627	3.8195E-03	.0699	.1000	.750
203	534	2.717	.309	3.999E-04	.0073	4.8126E-04	.0088	5.3573E-04	.0098	.4000	.750
204	533	1.998	.238	3.077E-04	.0056	3.7015E-04	.0068	4.1199E-04	.0075	.8000	.780

GROUP
102

365978

365979

AEDC(AMO)(INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
39	1	KARM-UNU	14.00	595.9	1307	9.98	12.12	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FR (R= .009FT)	SIFR (R= .009FT)	SWITCH POSITION
94.7	.057	2.591	4315	5.043E-05	1.067E-08	2.52E 06	9.475E-02	1.501E-02	1

PC NO	TM	DTM,F	Q-DOT	M(T0)	M(T0)/MREF	P(T0)	M(T0)/MREF	M(T5)0	M(T5)0/MREF	FUSELAGE X/L	FUSELAGE Y/YMAX
1	612	17M.304	33.181	4.772E-02	.4715	5.8766E-02	1.0733	6.6960E-02	1.2139	0	0
2	549	77.49M	13.163	1.782E-02	.3606	2.1660E-02	.3956	2.4270E-02	.4433	.0100	-0
3	544	3M.98M	6.197	8.228E-03	.1503	9.9559E-03	.1818	1.1124E-02	.2032	.0100	-.441
4	548	18.37M	2.412	3.702E-03	.0676	4.4714E-03	.0817	4.9900E-03	.0911	.0100	-1.000
5	545	10.426	1.650	2.184E-03	.0395	2.611HE-03	.0477	2.9133E-03	.0532	.0100	0
6	559	90.682	8.636	1.153E-02	.2107	1.3974E-02	.2552	1.5627E-02	.2854	.0200	-0
7	544	34.227	6.928	9.149E-03	.1660	1.1131E-02	.2033	1.243HE-02	.2272	.0300	-0
8	552	30.471	5.140	7.065E-03	.1290	8.5627E-03	.1560	9.5404E-03	.1743	.0300	-.303
9	547	15.626	2.475	3.253E-03	.0594	3.9277E-03	.0717	4.3823E-03	.0800	.0300	-1.000
10	543	7.365	1.325	1.734E-03	.0317	2.0924E-03	.0382	2.3332E-03	.0426	.0300	0
11	552	30.877	6.089	8.063E-03	.1473	9.7515E-03	.1781	1.0842E-02	.1984	.0400	-0
12	547	19.210	3.779	4.971E-03	.0908	6.0060E-03	.1097	6.6994E-03	.1224	.0500	-0
13	548	19.345	3.806	5.009E-03	.0915	6.0447E-03	.1104	6.7512E-03	.1233	.0500	-.310
14	547	14.420	2.571	3.316F-03	.0606	4.0044E-03	.0731	4.4684E-03	.0816	.0500	-1.000
15	544	6.533	1.354	1.772E-03	.0324	2.1378E-03	.0390	2.3840E-03	.0435	.0800	0
16	546	14.561	1.424	2.396F-03	.0438	2.8931E-03	.0528	3.2278E-03	.0590	.0800	-0
17	546	12.612	2.134	2.701E-03	.0512	3.3M13E-03	.0618	3.7720E-03	.0689	.0800	-.360
18	544	8.863	1.498	1.961E-03	.0358	2.3844E-03	.0432	2.6389E-03	.0482	.0800	-1.000
19	540	6.777	1.254	1.634F-03	.0298	1.9894E-03	.0364	2.1952E-03	.0401	.1000	-0
20	562	9.885	.754	9.859E-04	.0180	1.1M92E-03	.0217	1.3258E-03	.0242	.1000	-.383
21	542	9.077	1.444	1.940E-03	.0354	2.3394E-03	.0427	2.6081E-03	.0476	.1000	-.817
22	541	8.125	1.101	1.436F-03	.0262	1.7319E-03	.0316	1.9304E-03	.0353	.1000	-1.000
23	540	2.85M	.520	6.777E-04	.0124	8.1682E-04	.0149	9.1021E-04	.0166	.1000	.783
24	539	2.357	.449	5.845F-04	.0107	7.0438E-04	.0129	7.8491E-04	.0143	.1000	0
25	537	8.29M	1.656	2.153F-03	.0393	2.5928E-03	.0474	2.8880E-03	.0527	.1500	-.893
26	534	6.547	1.278	1.663F-03	.0302	1.9992E-03	.0363	2.2145E-03	.0404	.1500	-1.000
27	534	2.649	.503	6.498E-04	.0119	7.8148E-04	.0143	8.7036E-04	.0159	.1500	.684
28	534	1.491	.239	3.031E-04	.0055	3.6448E-04	.0067	4.0595E-04	.0074	.1500	0
29	525	4.504	.882	1.026F-03	.0187	1.2320E-03	.0225	1.3694E-03	.0250	.2000	-0
30	526	6.436	1.252	1.603E-03	.0293	1.9247E-03	.0352	2.1396E-03	.0391	.2000	-.278
31	527	8.485	1.742	2.233F-03	.0408	2.6830E-03	.0490	2.9833E-03	.0545	.2000	-.466
32	528	8.850	1.723	2.212F-03	.0404	2.6575E-03	.0485	2.9555E-03	.0540	.2000	-.792
33	528	7.383	1.318	1.692E-03	.0309	2.0327E-03	.0371	2.2607E-03	.0413	.2000	-1.000
34	530	1.963	.372	4.787E-04	.0087	5.7547E-04	.0105	6.4022E-04	.0117	.2000	.888
35	532	5.069	.910	1.174F-03	.0214	1.4124E-03	.0258	1.5719E-03	.0287	.2000	0
36	533	7.316	1.190	1.537E-03	.0281	1.8487E-03	.0339	2.0577E-03	.0376	.2100	0
37	541	19.143	3.439	4.486E-03	.0819	5.4085E-03	.0988	6.0282E-03	.1101	.2200	0
38	541	53.652	8.518	1.120F-02	.2057	1.3613E-02	.2486	1.5402E-02	.2777	.2300	0
39	536	14.04M	2.747	3.561E-03	.0650	4.2882E-03	.0783	4.7756E-03	.0872	.2400	.486
40	534	10.702	1.683	2.177E-03	.0398	2.6193E-03	.0478	2.9158E-03	.0533	.2500	0
41	532	5.693	1.142	1.472E-03	.0269	1.7711E-03	.0323	1.9709E-03	.0360	.2700	.465
42	532	5.367	1.081	1.393F-03	.0255	1.6749E-03	.0306	1.8649E-03	.0341	.2700	.465
43	531	2.862	.428	5.507E-04	.0101	6.6220E-04	.0121	7.3676E-04	.0135	.2700	0
44	523	3.250	.561	7.155F-04	.0131	8.5867E-04	.0157	9.5415E-04	.0174	.3000	-0
45	524	6.052	1.110	1.410F-03	.0259	1.7001E-03	.0311	1.8893E-03	.0345	.3000	-.312
46	527	8.510	1.747	2.238F-03	.0409	2.6885E-03	.0491	2.9862E-03	.0546	.3000	-.504
47	528	9.409	1.374	1.764F-03	.0322	2.1196E-03	.0387	2.3574E-03	.0431	.3000	-.857
48	528	7.614	1.271	1.638E-03	.0299	1.9680E-03	.0359	2.1885E-03	.0400	.3000	-1.000
49	528	4.566	.849	1.140F-03	.0208	1.3702E-03	.0250	1.5237E-03	.0278	.3000	.983
50	528	1.945	.377	4.833E-04	.0088	5.8076E-04	.0106	6.4586E-04	.0118	.3000	.853
51	531	5.022	1.034	1.331F-03	.0243	1.6008E-03	.0292	1.7811E-03	.0325	.3000	.433
52	531	4.419	.909	1.171E-03	.0214	1.4076E-03	.0257	1.5660E-03	.0286	.3000	.361
53	529	1.217	.204	2.622E-04	.0048	3.1517E-04	.0058	3.5055E-04	.0064	.3000	0
54	525	2.116	.411	5.253E-04	.0096	6.3163E-04	.0115	7.0091E-04	.0128	.4000	-0
55	525	4.340	.844	1.079F-03	.0197	1.2953E-03	.0237	1.4398E-03	.0263	.4000	-.321
56	527	7.764	1.510	1.934F-03	.0353	2.3234E-03	.0424	2.5833E-03	.0472	.4000	-.526
57	531	15.50M	2.688	3.463E-03	.0632	4.1642E-03	.0761	4.6334E-03	.0846	.4000	-.951
58	529	10.75M	1.920	2.466E-03	.0450	2.9642E-03	.0541	3.2969E-03	.0602	.4000	-1.000
59	526	5.54M	1.058	1.355E-03	.0247	1.6271E-03	.0297	1.8090E-03	.0330	.4000	1.000
60	528	4.35M	.777	9.967E-04	.0182	1.1974E-03	.0219	1.3315E-03	.0243	.4000	.906
61	527	2.37M	.423	5.426F-04	.0099	6.5188E-04	.0119	7.2483E-04	.0132	.4000	.750
62	529	2.303	.361	4.639F-04	.0085	5.5749E-04	.0102	6.2004E-04	.0113	.4000	0
63	530	11.613	2.074	2.667E-03	.0487	3.2044E-03	.0584	3.5664E-03	.0651	.4500	-1.000
64	528	5.196	1.039	1.333E-03	.0243	1.6010E-03	.0292	1.7803E-03	.0325	.4500	1.000
65	528	4.00M	.737	9.445F-04	.0173	1.134HE-03	.0207	1.2618E-03	.0230	.4500	.990
66	530	1.644	.303	3.894E-04	.0071	4.6809E-04	.0085	5.2074E-04	.0095	.5000	-0
67	531	3.482	.660	8.492E-04	.0155	1.0210E-03	.0186	1.1359E-03	.0207	.5000	-.277
68	531	9.907	1.152	1.483E-03	.0271	1.7829E-03	.0326	1.9837E-03	.0362	.5000	-.553
69	533	10.367	1.910	2.465F-03	.0450	2.9649E-03	.0542	3.2999E-03	.0603	.5000	-.830
70	535	1M.367	3.490	4.519F-03	.0825	5.4405E-03	.0994	6.0579E-03	.1106	.5000	-1.000
72	530	5.25M	1.053	1.359E-03	.0247	1.6288E-03	.0297	1.8120E-03	.0331	.5000	1.000
73	529	3.43M	.631	8.111F-04	.0148	9.7498E-04	.0178	1.0845E-03	.0198	.5000	.886
74	529	2.25M	.410	5.264E-04	.0096	6.3243E-04	.0116	7.0366E-04	.0129	.5000	.640
75	512	9.769	1.031	1.329E-03	.0243	1.5987E-03	.0292	1.7791E-03	.0325	.5000	0
76	535	1.577	.257	3.322E-04	.0061	3.9985E-04	.0073	4.4519E-04	.0081	.5500	-0
77	530	3.000	.471	6.055E-04	.0111	7.2793E-04	.0133	8.0978E-04	.0148	.5500	-1.000
78	531	3.603	.546	7.038E-04	.0129	8.4612E-04	.0155	9.4143E-04	.0172	.5500	1.000
79	529	2.502	.460	5.914E-04	.0108	7.1086E-04	.0130	7.9069E-04	.0144	.5500	.935
80	535	1.386	.263	3.410E-04	.0062	4.1050E-04	.0075	4.5707E-04	.0083	.6000	-0
81	535	2.967	.612	7.927E-04	.0145	9.5429E-04	.0174	1.0626E-03	.0194	.6000	-.249
83	537	7.830	1.532	1.990E-03	.0363	2.3944E-03	.0438	2.6694E-03	.0488	.6000	-.748
84	542	1.081	.213	2.743E-04	.0050	3.2987E-04	.0060	3.6708E-04	.0067	.6000	-1.000
85	544	1.742	.312	4.029E-04	.0074	4.8485E-04	.0089	5.3971E-04	.0099	.6000	1.000
86	531	1.651	.313	4.030E-04	.0074	4.8495E-04	.0089	5.3912E-04	.0098	.6000	.907
87	532	3.801	.659	8.493E-04	.0155	1.0215E-03	.0187	1.1367E-03	.0208	.6000	0
88	539	1.282	.230	2.993E-04	.0055	3.6064E-04	.0066	4.0180E-04	.0073	.6500	-0
89	538	1.625	.301	3.911E-04	.0071	4.7127E-04	.0086	5.2510E-04	.0096	.7000	-0
90	539	2.574	.505	6.574E-04	.0120	7.9220E-04	.0145	8.8272E-04	.0161	.7000	-.235
91	560	3.862	.757	9.863E-04	.0180	1.18R8E-03	.0217	1.3249E-03	.0242	.7000	-.469
92	543	4.757	.882	1.154E-03	.0211	1.3917E-03	.0254	1.5519E-03	.0283	.7000	-.704
93	542	4.828	.973	1.272F-03	.0232	1.5343E-03	.0280	1.7106E-03	.0312	.7000	-.848
94	540	1.550	.337	4.395E-04	.0080	5.2975E-04	.0097	5.9032E-04	.0108	.7000	1.000
95	535	1.419	.254	3.290E-04	.0060	3.9601E-04	.0072	4.4093E-04	.0081	.7000	.908
96	534	3.329	.596	7.703E-04	.0141	9.2699E-04	.0169	1.0319E-03	.0188	.7000	0
97	540	2.249	.416	5.426E-04	.0099	6.5403E-04	.0119	7.2890E-04	.0133	.7500	-0
98	540	3.370	.587	7.652E-04	.0140	9.2240E-04	.0168	1.0280E-03	.0188	.8000	-0

GROUP
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ARDC(AMD)(INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-PODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
39	1	RAH-040	8.00	552.5	1307	9.98	12.04	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	U-INF (FT/SEC)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RREF-FT (RE .009FT)	SIRH (RE .009FT)	SWITCH POSITION
94.7	.057	2.935	.0415	5.010E-05	7.046E-08	2.82E 06	9.458E-02	3.992E-02	2

TC NO	TW	DTHLT	U-DOT	M(I0)	M(I0)/MREF	M(.9I0)	M(.9I0)/MREF	M(.85I0)	M(.85I0)/MREF	FUSELAGE A/L	FUSELAGE Y/YMAX
99	536	2.881	.548	7.104E-04	.0130	8.556E-04	.0157	9.530E-04	.0175	.8000	-.223
100	536	4.068	.766	9.933E-04	.0182	1.196E-03	.0219	1.332E-03	.0244	.8000	-.446
101	540	3.784	.672	8.757E-04	.0160	1.055E-03	.0193	1.176E-03	.0216	.8000	-.669
102	540	3.370	.647	9.092E-04	.0167	1.094E-03	.0201	1.221E-03	.0224	.8000	-.896
103	538	4.140	.819	8.047E-04	.0147	9.694E-04	.0178	1.080E-03	.0198	.8500	-0
104	538	2.647	.475	8.134E-04	.0133	7.447E-04	.0136	8.298E-04	.0152	.9000	-0
105	538	1.940	.340	8.065E-04	.0093	8.107E-04	.0112	6.749E-04	.0125	.9000	-.226
106	537	1.483	.257	9.635E-04	.0085	8.982E-04	.0102	8.218E-04	.0114	.9000	-.452
107	539	1.901	.341	9.440E-04	.0081	8.450E-04	.0094	7.960E-04	.0109	.9000	-.678
108	538	1.810	.335	9.352E-04	.0080	8.269E-04	.0096	8.842E-04	.0107	.9000	-.817
109	537	1.784	.259	8.315E-04	.0061	8.992E-04	.0073	4.447E-04	.0081	.9000	1.000
110	535	.822	.111	1.443E-04	.0026	1.737E-04	.0032	1.934E-04	.0035	.9000	.884
111	535	.580	.094	1.223E-04	.0022	1.472E-04	.0027	1.634E-04	.0030	.9000	.610
112	538	3.237	.616	8.009E-04	.0147	9.647E-04	.0177	1.078E-03	.0197	.9500	-0
114	537	2.945	.556	7.224E-04	.0132	8.706E-04	.0160	9.699E-04	.0178	.9900	-0
115	538	2.384	.468	8.043E-04	.0111	7.428E-04	.0134	8.165E-04	.0150	.9900	-.253
116	538	1.903	.373	8.467E-04	.0089	5.839E-04	.0107	6.506E-04	.0119	.9900	-.507
117	538	1.604	.314	8.082E-04	.0075	4.914E-04	.0090	5.479E-04	.0100	.9900	-.660
118	538	1.314	.238	8.044E-04	.0056	3.641E-04	.0066	4.112E-04	.0075	.9900	-.793
119	535	.169	.038	9.993E-05	.0009	5.689E-05	.0011	6.556E-05	.0012	.9900	.780
120	532	2.405	.274	8.532E-04	.0065	4.248E-04	.0078	4.728E-04	.0087	.9900	.305
										LOWER WING SURFACE A/C	LOWER WING SURFACE Y/S
121	553	55.381	10.622	1.409E-02	.2581	1.704ZE-02	.3122	1.903BE-02	.3488	0	.050
122	558	55.054	9.348	1.254F-02	.2297	1.518AE-02	.2783	1.698BE-02	.3112	0	.100
124	544	7.177	1.292	1.693E-03	.0310	2.043IE-03	.0374	2.278GE-03	.0417	.2000	.100
126	539	4.075	.519	8.742F-04	.0124	8.143E-04	.0149	9.065YE-04	.0166	.6000	.100
127	538	2.969	.533	8.931E-04	.0127	8.951BE-04	.0153	9.304SE-04	.0170	.7000	.100
128	537	2.750	.374	8.849F-04	.0089	5.834SE-04	.0107	6.503YE-04	.0119	.9000	.100
134	559	65.227	13.270	1.775F-02	.3252	2.151QE-02	.3941	2.405YE-02	.4408	0	.150
135	559	44.815	8.122	1.080F-02	.1978	1.306GE-02	.2394	1.460IE-02	.2675	0	.250
136	547	15.801	2.849	3.741E-03	.0687	4.530YE-03	.0830	5.056AE-03	.0926	.1000	.250
137	545	8.509	1.440	1.890F-03	.0346	2.281HE-03	.0414	2.569SE-03	.0466	.2000	.250
138	545	5.444	1.010	1.325F-03	.0243	1.594GE-03	.0293	1.781IE-03	.0327	.4000	.250
140	543	3.319	.576	7.577F-04	.0139	9.140IE-04	.0167	1.019ZE-03	.0187	.6000	.250
142	549	1.580	.258	3.350F-04	.0061	4.044IE-04	.0074	4.506ZE-04	.0083	.9000	.250
147	560	44.314	9.037	1.210F-02	.2217	1.467IE-02	.2688	1.641ZE-02	.3007	0	.450
148	549	17.951	3.185	4.178E-03	.0765	5.048IE-03	.0925	5.636JE-03	.1033	.1000	.450
149	559	45.168	8.447	1.130F-02	.2070	1.364HE-02	.2500	1.531QE-02	.2805	0	.500
150	549	17.394	3.425	4.522E-03	.0828	5.464GE-03	.1001	6.100GE-03	.1118	.1000	.500
151	548	9.117	1.794	2.369F-03	.0433	2.856GE-03	.0523	3.188JE-03	.0584	.2000	.500
152	548	5.870	1.027	1.354E-03	.0248	1.634GE-03	.0300	1.824JE-03	.0334	.4000	.500
154	545	3.080	.700	9.177F-04	.0168	1.107AE-03	.0203	1.235JE-03	.0226	.6000	.500
156	542	2.031	.419	5.473E-04	.0100	6.601OE-04	.0121	7.359QE-04	.0135	.8000	.500
157	541	2.439	.438	5.718F-04	.0105	6.893ZE-04	.0126	7.682YE-04	.0141	.9000	.500
163	557	38.053	7.106	9.477E-03	.1736	1.147BE-02	.2103	1.283ZE-02	.2351	0	.550
164	552	20.959	3.902	5.166F-03	.0947	6.246GE-03	.1145	6.976IE-03	.1278	.1000	.550
165	541	46.501	8.703	1.167E-02	.2139	1.415GE-02	.2594	1.583GE-02	.2902	0	.600
166	554	23.964	4.338	5.754F-03	.1054	6.962IE-03	.1276	7.778JE-03	.1425	.1000	.600
167	559	99.187	8.123	1.088E-02	.1991	1.316IE-02	.2412	1.472IE-02	.2698	0	.650
168	553	23.280	4.593	5.993E-03	.1116	7.370GE-03	.1350	8.234OE-03	.1509	.1000	.650
169	564	51.782	9.418	1.268F-02	.2362	1.533HE-02	.2814	1.721BE-02	.3155	0	.700
170	550	13.256	2.401	3.171E-03	.0581	3.832ZE-03	.0702	4.278GE-03	.0784	.1000	.700
171	566	55.829	10.186	1.372F-02	.2515	1.666SE-02	.3053	1.866SE-02	.3420	0	.750
172	556	30.538	5.384	7.142E-03	.1308	8.646ZE-03	.1584	9.664ZE-03	.1771	.1000	.750
173	554	19.769	3.758	4.657E-03	.0870	5.624IE-03	.0811	6.283SE-03	.0906	.2000	.750
175	548	8.125	1.239	1.632E-03	.0299	1.971JE-03	.0361	2.200IE-03	.0403	.4000	.750
176	543	1.240	.237	3.094E-04	.0057	3.732IE-04	.0068	4.161YE-04	.0076	.7000	.750
178	544	2.020	.435	5.703E-04	.0104	6.881JE-04	.0126	7.673BE-04	.0141	.8000	.750
183	554	22.443	3.200	4.251E-03	.0779	5.144OE-03	.0942	5.747BE-03	.1053	.0	.900
184	551	12.481	2.255	2.983E-03	.0547	3.606AE-03	.0661	4.027AE-03	.0738	.2000	.900
185	545	6.135	1.105	1.450E-03	.0266	1.749BE-03	.0321	1.951BE-03	.0358	.6000	.900
188	543	4.064	.839	1.098E-03	.0201	1.325ZE-03	.0243	1.477IE-03	.0271	.8000	.900
										UPPER WING SURFACE A/C	UPPER WING SURFACE Y/S
129	541	8.149	.938	1.224F-03	.0224	1.476JE-03	.0270	1.649IE-03	.0302	.1000	.100
130	541	2.210	.373	4.868F-04	.0089	5.868IE-04	.0108	6.541IE-04	.0120	.2000	.100
131	539	.446	.082	1.069F-04	.0020	1.288JE-04	.0024	1.436DE-04	.0026	.4000	.100
132	538	.449	.085	1.111F-04	.0020	1.338IE-04	.0025	1.491JE-04	.0027	.7000	.100
133	536	.089	.015	1.995E-05	.0004	2.401QE-05	.0004	2.674BE-05	.0005	.9000	.100
143	545	8.004	1.616	2.120F-03	.0388	2.555IE-03	.0469	2.854QE-03	.0523	.1000	.250
145	543	1.843	.320	4.185E-04	.0077	5.048QE-04	.0092	5.624AE-04	.0103	.4000	.250
146	537	.430	.057	7.463F-05	.0014	8.989IE-05	.0016	1.001JE-04	.0018	.9000	.250
158	546	7.467	1.142	1.502E-03	.0275	1.811IE-03	.0332	2.021IE-03	.0371	.1000	.500
159	546	5.485	.899	1.102F-03	.0217	1.329GE-03	.0261	1.592IE-03	.0292	.2000	.500
160	546	2.948	.483	5.950F-04	.0116	7.067SE-04	.0140	8.559IE-04	.0157	.4000	.500
161	541	.681	.153	2.003F-04	.0037	2.414IE-04	.0044	2.691QE-04	.0049	.8000	.500
162	538	1.249	.170	2.207F-04	.0040	2.658AE-04	.0049	2.961BE-04	.0054	.9000	.500
179	551	21.746	3.937	5.206E-03	.0954	6.294ZE-03	.1153	7.024BE-03	.1288	.1000	.750
180	547	7.923	1.429	1.881F-03	.0345	2.271IE-03	.0416	2.535IE-03	.0464	.2000	.750
181	546	5.071	.831	8.371E-04	.0153	1.010IE-03	.0185	1.127BE-03	.0207	.4000	.750
182	540	1.813	.272	3.548E-04	.0065	4.276BE-04	.0078	4.766JE-04	.0087	.8000	.750
										VERTICAL STABILIZER A/C	VERTICAL STABILIZER Z/S
187	550	33.531	5.503	7.268F-03	.1332	8.784BE-03	.1610	9.807YE-03	.1797	0	.100
188	535	4.988	.806	1.122E-03	.0206	1.351JE-03	.0248	1.507EE-03	.0276	.1000	.100
189	533	1.229	.207	2.670E-04	.0049	3.212IE-04	.0059	3.579BE-04	.0066	.4000	.100
191	534	.510	.097	1.253E-04	.0023	1.507AE-04	.0028	1.678IE-04	.0031	.8000	.100
192	550	34.500	6.606	8.725F-03	.1599	1.054SE-02	.1932	1.177JE-02	.2157	0	.250
193	540	12.491	2.175	2.836E-03	.0520	3.419IE-03	.0626	3.809AE-03	.0698	.1000	.250
194	536	3.691	.621	8.063E-04	.0148	9.709QE-04	.0178	1.081JE-03	.0198	.4000	.250
195	535	1.106	.198	2.567E-04	.0047	3.089TE-04	.0057	3.440JE-04	.0063	.8000	.250
197	546	26.149	4.853	6.374E-03	.1168	7.695OE-03	.1410	8.584SE-03	.1573	.1000	.500
198	540	3.270	.587	7.661E-04	.0140	9.234BE-04	.0169	1.029ZE-03	.0189	.4000	.500
200	537	1.604	.287	3.732E-04	.0068	4.498BE-04	.0082	5.008JE-04	.0092	.8000	.500
201	546	62.269	12.024	1.623E-02	.2973	1.970OE-02	.3609	2.206JE-02	.4042	0	.750
202	547	31.239	5.584	4.718E-03	.0864	5.698IE-03	.1044	6.358BE-03	.1165	.1000	.750
203	539	4.605	.526	6.852E-04	.0126	8.258OE-04	.0151	9.201YE-04	.0169	.4000	.750
204	537	2.535	.303	3.939E-04	.0072	4.744YE-04	.0087	5.285SE-04	.0097	.8000	.750

GROUP
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365986

365987

ARO,(AEDC)INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREREAD	ROLL-MODEL	YAW
40	7	KARMAN	7.94	1664	1254	9.95	12.05	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-PH (IN .0009FT)	SIPH (IN .0009FT)	SWITCH POSITION
92.1	.0134	.0740	3735.	1.6930E-09	7.4198E-08	8.8680E 05	3.9825E-02	0.6473E-02	2

TC NO	IN	D(INCH)	W-D001	M(I)0	M(I)0)/MREF	M(.9I)0	M(.9I)0)/MREF	M(.85I)0	M(.85I)0)/MREF

FUSELAGE

										A/L	Y/YMAX
99	533	1.142	.217	3.0006E-04	.0099	3.6392E-04	.0120	4.0675E-04	.0134	.8000	-.223
100	533	1.670	.317	9.3948E-04	.0145	9.3262E-04	.0176	5.9918E-04	.0197	.8000	-.446
101	517	1.764	.334	5.0082E-04	.0168	6.1592E-04	.0204	6.8898E-04	.0228	.8000	-.669
102	518	1.825	.377	5.2948E-04	.0174	6.3811E-04	.0211	7.1384E-04	.0236	.8000	-.806
103	516	.569	.119	1.6038E-04	.0053	1.9419E-04	.0064	2.1715E-04	.0072	.8500	-0
104	515	.614	.110	1.5328E-04	.0051	1.8553E-04	.0061	2.0765E-04	.0069	.9000	-0
105	516	.817	.140	2.2228E-04	.0073	2.6942E-04	.0089	3.0111E-04	.0100	.9000	-.246
106	516	.800	.138	2.1937E-04	.0073	2.6573E-04	.0088	2.9716E-04	.0098	.9000	-.492
107	517	1.174	.210	2.9348E-04	.0097	3.5557E-04	.0118	3.9770E-04	.0131	.9000	-.678
108	517	1.130	.200	2.9208E-04	.0097	3.5381E-04	.0117	3.9571E-04	.0131	.9000	-.817
109	516	.385	.078	1.0843E-04	.0036	1.3118E-04	.0043	1.4671E-04	.0049	.9000	1.000
110	516	.560	.093	1.2998E-04	.0043	1.5736E-04	.0052	1.7596E-04	.0058	.9000	.884
111	516	.282	.066	9.3939E-05	.0031	1.1374E-04	.0038	1.2716E-04	.0042	.9000	.810
112	517	.339	.064	8.4988E-05	.0029	1.0288E-04	.0035	1.1504E-04	.0040	.9000	-0
113	517	.421	.080	1.1159E-04	.0037	1.3511E-04	.0045	1.5115E-04	.0050	.9000	-0
114	517	.543	.108	1.4439E-04	.0049	1.7473E-04	.0059	2.0104E-04	.0066	.9000	-.253
115	517	.731	.143	1.9068E-04	.0065	2.3087E-04	.0078	2.7056E-04	.0089	.9000	-.507
116	517	.731	.143	1.9068E-04	.0065	2.3087E-04	.0078	2.7056E-04	.0089	.9000	-.660
117	517	.731	.143	1.9068E-04	.0065	2.3087E-04	.0078	2.7056E-04	.0089	.9000	-.660
118	516	.729	.131	1.8478E-04	.0060	2.2373E-04	.0073	2.6216E-04	.0082	.9000	-.743
119	515	.481	.086	2.2128E-05	.0007	2.6794E-05	.0009	2.9961E-05	.0010	.9900	.780
120	513	.988	.112	1.5618E-04	.0052	1.8895E-04	.0062	2.1120E-04	.0070	.9900	.605

LOWER WING SURFACE

										A/C	Y/S
121	546	27.934	5.338	7.4536E-03	.2491	9.1575E-03	.3027	1.0201E-02	.3392	0	.050
122	550	29.806	5.056	7.1943E-03	.2375	8.7601E-03	.2889	9.8026E-03	.3241	0	.100
124	541	3.719	.667	9.3588E-04	.0309	1.1357E-03	.0375	1.2716E-03	.0420	.2000	.100
126	536	1.741	.293	4.0485E-04	.0135	4.9494E-04	.0164	5.5354E-04	.0183	.6000	.100
127	536	1.512	.271	3.7728E-04	.0125	4.5704E-04	.0151	5.1104E-04	.0169	.7000	.100
128	534	1.237	.168	2.3328E-04	.0077	2.8237E-04	.0093	3.1569E-04	.0104	.9000	.100
134	549	33.134	6.705	9.4514E-03	.3145	1.1573E-02	.3826	1.2977E-02	.4290	0	.150
135	547	25.869	4.660	6.5408E-03	.2179	8.0110E-03	.2648	8.9784E-03	.2968	0	.250
136	542	8.709	1.566	2.2008E-03	.0727	2.6703E-03	.0883	2.9899E-03	.0988	.1000	.250
137	541	5.169	.862	1.2098E-03	.0400	1.4674E-03	.0485	1.6428E-03	.0543	.2000	.250
138	540	2.824	.524	7.3308E-04	.0242	8.8909E-04	.0294	9.9505E-04	.0329	.4000	.250
140	539	1.041	.248	3.4944E-04	.0132	4.2431E-04	.0160	5.4192E-04	.0179	.6000	.250
142	536	.962	.150	2.0849E-04	.0069	2.5310E-04	.0084	2.8302E-04	.0094	.9000	.250
147	549	24.439	4.545	6.4485E-03	.2132	7.8417E-03	.2593	8.7955E-03	.2908	0	.450
148	544	9.631	1.715	2.4164E-03	.0799	2.9337E-03	.0970	3.2881E-03	.1086	.1000	.450
149	549	23.756	4.418	6.2660E-03	.2070	7.6161E-03	.2517	8.5369E-03	.2822	0	.500
150	546	9.657	1.840	2.6447E-03	.0875	3.2166E-03	.1063	3.6006E-03	.1190	.1000	.500
151	542	4.967	.974	1.3868E-03	.0458	1.6864E-03	.0557	1.8991E-03	.0615	.2000	.500
152	542	3.434	.649	9.4158E-04	.0312	1.1451E-03	.0378	1.2939E-03	.0427	.4000	.500
154	539	2.224	.411	5.7498E-04	.0190	6.9930E-04	.0231	7.8034E-04	.0258	.6000	.500
156	540	1.531	.296	4.3408E-04	.0144	5.2798E-04	.0174	5.9468E-04	.0196	.8000	.500
157	537	1.282	.230	3.2058E-04	.0106	3.8984E-04	.0128	4.3443E-04	.0144	.9000	.500
163	547	25.767	4.778	6.7558E-03	.2233	8.2111E-03	.2715	9.2028E-03	.3042	0	.550
164	545	11.207	2.040	2.9435E-03	.0970	3.5866E-03	.1179	3.9960E-03	.1321	.1000	.550
165	540	24.564	4.470	6.4491E-03	.2146	7.8974E-03	.2611	8.8572E-03	.2928	0	.600
166	546	12.997	2.362	3.3108E-03	.1094	4.0225E-03	.1330	4.5079E-03	.1490	.1000	.600
167	548	23.884	4.310	6.1076E-03	.2019	7.4254E-03	.2455	8.3252E-03	.2752	0	.650
168	546	12.361	2.249	3.1429E-03	.1134	4.1642E-03	.1377	4.6842E-03	.1543	.1000	.650
169	541	26.061	4.809	6.8387E-03	.2260	8.3215E-03	.2751	9.3343E-03	.3086	0	.700
170	543	8.812	1.625	2.3238E-03	.0839	2.8918E-03	.0692	2.3428E-03	.0774	.1000	.700
171	542	28.819	5.258	7.4168E-03	.2452	9.0306E-03	.2985	1.0132E-02	.3350	0	.750
172	547	15.349	2.842	3.7918E-03	.1253	4.6041E-03	.1523	5.1665E-03	.1707	.1000	.750
173	544	8.623	1.728	2.3729E-03	.0572	2.8802E-03	.0696	2.3524E-03	.0778	.2000	.750
175	542	3.305	.668	9.3608E-04	.0309	1.1361E-03	.0376	1.2721E-03	.0421	.4000	.750
176	539	.620	.118	1.6651E-04	.0055	2.0018E-04	.0066	2.2348E-04	.0074	.7000	.750
178	539	1.311	.235	3.2918E-04	.0109	3.9913E-04	.0132	4.4663E-04	.0148	.8000	.750
183	547	11.221	1.594	2.2538E-03	.0745	2.7387E-03	.0905	3.0694E-03	.1015	0	.900
184	544	6.866	1.225	1.7258E-03	.0570	2.0953E-03	.0693	2.3484E-03	.0776	.2000	.900
185	540	2.873	.516	7.2338E-04	.0239	8.7756E-04	.0290	9.8227E-04	.0325	.6000	.900
186	538	2.328	.418	5.8378E-04	.0193	7.0773E-04	.0234	7.9185E-04	.0262	.8000	.900

UPPER WING SURFACE

										A/C	Y/S
129	540	3.409	.519	7.2738E-04	.0240	8.8219E-04	.0292	9.8733E-04	.0326	.1000	.100
130	539	1.095	.185	2.5408E-04	.0085	3.1285E-04	.0103	3.5006E-04	.0116	.2000	.100
131	538	.372	.069	9.5948E-05	.0032	1.1631E-04	.0038	1.3012E-04	.0043	.4000	.100
132	536	.069	.013	1.8178E-05	.0006	2.2013E-05	.0007	2.4817E-05	.0008	.7000	.100
133	534	.242	.042	5.8448E-05	.0019	7.0772E-05	.0023	7.9117E-05	.0026	.9000	.100
143	541	3.860	.778	1.0918E-03	.0361	1.3236E-03	.0438	1.4817E-03	.0490	.1000	.250
145	539	.922	.155	2.1738E-04	.0072	2.6357E-04	.0087	2.9493E-04	.0098	.4000	.250
146	535	.309	.054	7.4698E-05	.0025	9.0479E-05	.0030	1.0118E-04	.0033	.9000	.250
158	542	4.367	.868	1.1518E-04	.0309	1.3494E-03	.0375	1.2707E-03	.0420	.1000	.500
159	542	3.241	.538	7.5528E-04	.0250	9.1667E-04	.0303	1.0264E-03	.0339	.2000	.500
160	541	1.041	.268	3.7628E-04	.0124	4.5691E-04	.0151	5.1108E-04	.0169	.4000	.500
161	537	.415	.072	1.0088E-04	.0033	1.2212E-04	.0040	1.3661E-04	.0045	.8000	.500
167	535	.803	.109	1.4148E-04	.0050	1.8333E-04	.0061	2.0497E-04	.0068	.9000	.500
179	544	10.040	1.807	2.5447E-03	.0841	3.0843E-03	.1021	3.4603E-03	.1144	.1000	.750
180	541	3.908	.702	9.8498E-04	.0328	1.1951E-03	.0395	1.3388E-03	.0442	.2000	.750
181	541	1.983	.248	3.4883E-04	.0115	4.2257E-04	.0140	4.7303E-04	.0156	.4000	.750
182	537	.989	.167	2.3248E-04	.0077	2.8161E-04	.0093	3.1498E-04	.0104	.8000	.750

VERTICAL STABILIZER

										A/C	Z/S
187	542	9.933	1.624	2.2818E-03	.0750	2.7691E-03	.0919	3.1007E-03	.1025	0	.100
188	536	2.180	.348	5.2888E-04	.0175	6.4059E-04	.0212	7.1634E-04	.0237	.1000	.100
189	535	.464	.078	1.0888E-04	.0036	1.3175E-04	.0044	1.4732E-04	.0049	.4000	.100
191	535	.141	.027	3.3738E-05	.0012	4.5094E-05	.0015	5.0417E-05	.0017	.8000	.100
192	545	13.121	2.506	3.5368E-03	.1169	4.2994E-03	.1428	4.8126E-03	.1591	0	.250
193	538	4.332	.752	1.0528E-03	.0348	1.2747E-03	.0421	1.4260E-03	.0471	.1000	.250
194	536	.923	.155	2.1658E-04	.0072	2.6223E-04	.0087	2.9342E-04	.0097	.4000	.250
195	536	.607	.109	1.5148E-04	.0050	1.8342E-04	.0061	2.0510E-04	.0068	.8000	.250
197	542	9.313	1.725	2.4218E-03	.0800	2.9387E-03	.0971	3.2901E-03	.1088	.1000	.500
198	539	1.436	.258	3.6038E-04	.0119	4.3697E-04	.0144	4.8896E-04	.0162	.4000	.500
200	536	.854	.153	2.1348E-04	.0071	2.5852E-04	.0085	2.8912E-04	.0096	.8000	.500
201	542	32.935	6.316	9.0028E-03	.2976	1.0926E-02	.3624	1.2300E-02	.4066	0	.750
202	543	18.428	2.109	2.9688E-03	.0981	3.6012E-03	.1191	4.0389E-03	.1333	.1000	.750
203	538	2.442	.279	3.8978E-04	.0129	4.7258E-04	.0156	5.2886E-04	.0175	.4000	.750
204	536	1.684	.201	2.8008E-04	.0093	3.3923E-04	.0112	3.7934E-04	.0125	.8000	.750

GROUP
104

365994

365995

ARO,INC. (ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-PODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
40	7	AAM-040	7.94	1010.0	1261	9.93	12.07	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF ($LUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RHEF-FR (RE .009FT)	SIFR (RE .009FT)	SWITCH POSITION
92.7	.017	.767	3746	1.896E-05	1.962E-08	1.90E 05	2.984E-02	6.387E-02	1

TC NO	TW	DTWLT	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF	FUSELAGE A/L	FUSELAGE Y/YMAX
1	542	44.365	17.123	2.550E-02	.8947	3.1320E-02	1.0496	3.5350E-02	1.1847	0	0
2	537	41.942	6.904	9.807E-03	.3441	1.1945E-02	.4003	1.3907E-02	.4493	.0100	-0
3	536	20.292	3.219	4.524E-03	.1316	5.4984E-03	.1843	6.1621E-03	.2065	.0100	-.441
4	546	9.634	1.473	2.060E-03	.0690	2.5004E-03	.0838	2.8007E-03	.0939	.0100	-1.000
5	544	5.747	.909	1.266E-03	.0424	1.5365E-03	.0515	1.7199E-03	.0576	.0100	0
6	541	26.353	4.472	6.294E-03	.2109	7.6521E-03	.2564	8.5776E-03	.2875	.0200	-0
7	550	20.149	3.638	5.113E-03	.1714	6.2149E-03	.2083	6.9653E-03	.2334	.0300	-0
8	549	15.370	2.690	3.780E-03	.1267	4.5934E-03	.1539	5.1477E-03	.1725	.0300	-.303
9	546	8.184	1.296	1.810E-03	.0607	2.1976E-03	.0736	2.4608E-03	.0825	.0300	-1.000
10	543	4.480	.806	1.122E-03	.0376	1.3604E-03	.0456	1.5224E-03	.0510	.0300	0
11	550	15.413	3.038	4.265E-03	.1429	5.1830E-03	.1737	5.8045E-03	.1947	.0400	-0
12	546	9.960	1.958	2.737E-03	.0917	3.3223E-03	.1113	3.7206E-03	.1247	.0500	-0
13	547	9.817	1.930	2.701E-03	.0905	3.2793E-03	.1099	3.6729E-03	.1231	.0500	-.310
14	545	7.311	1.477	2.083E-03	.0698	2.5342E-03	.0849	2.8392E-03	.0951	.0500	-1.000
15	543	3.783	.784	1.091E-03	.0366	1.3235E-03	.0444	1.4812E-03	.0496	.0500	0
16	546	7.000	.980	1.231E-03	.0412	1.4943E-03	.0501	1.6736E-03	.0561	.0800	-0
17	546	6.409	1.045	1.516E-03	.0508	1.8404E-03	.0617	2.0609E-03	.0691	.0800	-.380
18	545	4.382	.761	1.035E-03	.0347	1.2561E-03	.0421	1.4064E-03	.0471	.0800	-1.000
19	545	3.354	.622	8.842E-04	.0296	1.0536E-03	.0353	1.1796E-03	.0395	.1000	-0
20	549	4.057	.958	9.974E-04	.0167	6.0342E-04	.0202	6.7615E-04	.0227	.1000	-.383
21	546	4.174	.648	9.478E-04	.0341	1.1629E-03	.0390	1.3024E-03	.0436	.1000	-.817
22	544	3.134	.564	7.870E-04	.0284	9.5501E-04	.0320	1.0691E-03	.0358	.1000	-1.000
23	544	1.620	.292	4.063E-04	.0146	4.9294E-04	.0165	5.5177E-04	.0185	.1000	.783
24	544	1.363	.260	3.628E-04	.0122	4.3997E-04	.0147	4.9250E-04	.0165	.1000	0
25	545	4.080	.820	1.144E-03	.0383	1.3879E-03	.0465	1.5538E-03	.0521	.1500	-.893
26	542	3.481	.643	9.498E-04	.0318	1.1507E-03	.0386	1.2875E-03	.0431	.1500	-1.000
27	541	1.429	.271	3.766E-04	.0126	4.5660E-04	.0153	5.1084E-04	.0171	.1500	.664
28	541	1.250	.197	2.742E-04	.0092	3.3246E-04	.0111	3.7197E-04	.0125	.1500	0
29	541	2.271	.408	5.669E-04	.0190	6.8718E-04	.0230	7.6907E-04	.0258	.2000	-0
30	542	3.351	.657	9.140E-04	.0306	1.1084E-03	.0371	1.2403E-03	.0416	.2000	-.278
31	543	4.618	.832	1.159E-03	.0388	1.4055E-03	.0471	1.5731E-03	.0527	.2000	-.466
32	544	4.034	.793	1.105E-03	.0370	1.3402E-03	.0449	1.5002E-03	.0503	.2000	-.792
33	544	3.344	.611	8.511E-04	.0285	1.0326E-03	.0346	1.1558E-03	.0387	.2000	-1.000
34	541	.859	.171	2.378E-04	.0080	2.8831E-04	.0097	3.2254E-04	.0108	.2000	.888
35	542	1.514	.272	3.782E-04	.0127	4.5859E-04	.0154	5.1311E-04	.0172	.2000	0
36	542	2.764	.498	6.928E-04	.0411	7.8217E-04	.0259	8.5269E-04	.0286	.2100	0
37	546	5.303	.955	1.339E-03	.0447	1.6206E-03	.0543	1.8145E-03	.0608	.2200	0
38	548	16.429	2.606	3.654E-03	.1225	4.4304E-03	.1488	4.9737E-03	.1667	.2300	0
39	543	5.586	1.007	1.412E-03	.0512	1.8529E-03	.0621	2.0740E-03	.0695	.2400	.486
40	542	4.968	.745	1.042E-03	.0348	1.3239E-03	.0444	1.4815E-03	.0496	.2500	0
41	542	2.087	.421	5.846E-04	.0196	7.0887E-04	.0238	7.9314E-04	.0266	.2700	.485
42	542	2.109	.424	5.888E-04	.0197	7.1393E-04	.0239	7.9888E-04	.0268	.2700	.485
43	541	1.000	.244	3.384E-04	.0113	4.1019E-04	.0137	4.5886E-04	.0154	.2700	0
44	541	1.088	.294	4.094E-04	.0137	4.9517E-04	.0166	5.5400E-04	.0186	.3000	-0
45	542	2.488	.552	7.667E-04	.0257	9.2967E-04	.0312	1.0402E-03	.0349	.3000	-.312
46	543	3.486	.822	1.144E-03	.0383	1.3878E-03	.0465	1.5532E-03	.0521	.3000	-.504
47	544	4.545	.669	9.339E-04	.0313	1.1333E-03	.0380	1.2687E-03	.0425	.3000	-.857
48	543	3.706	.626	8.725E-04	.0292	1.0594E-03	.0355	1.1846E-03	.0397	.3000	-1.000
49	541	2.172	.426	5.909E-04	.0198	7.1634E-04	.0240	8.0136E-04	.0269	.3000	.983
50	541	.798	.156	2.171E-04	.0073	2.6314E-04	.0088	2.9443E-04	.0099	.3000	.853
51	541	1.702	.352	4.892E-04	.0164	5.9304E-04	.0199	6.6344E-04	.0222	.3000	.633
52	541	1.688	.345	4.849E-04	.0162	5.8784E-04	.0197	6.5765E-04	.0220	.3000	.361
53	540	.736	.124	1.719E-04	.0058	2.0835E-04	.0070	2.3302E-04	.0078	.3000	0
54	540	1.271	.249	3.450E-04	.0116	4.1814E-04	.0140	4.6767E-04	.0157	.4000	-0
55	540	2.180	.427	5.926E-04	.0199	7.1823E-04	.0241	8.0340E-04	.0269	.4000	-.321
56	541	3.787	.763	1.031E-03	.0346	1.2500E-03	.0419	1.3992E-03	.0469	.4000	-.526
57	545	7.405	1.293	1.804E-03	.0604	2.1889E-03	.0734	2.4506E-03	.0821	.4000	-.951
58	543	5.449	.980	1.365E-03	.0457	1.6557E-03	.0555	1.8530E-03	.0621	.4000	-1.000
59	542	2.941	.561	7.794E-04	.0261	9.4505E-04	.0317	1.0574E-03	.0354	.4000	1.000
60	540	2.249	.404	5.603E-04	.0188	6.7916E-04	.0228	7.5970E-04	.0255	.4000	.906
61	540	1.383	.245	3.393E-04	.0114	4.1121E-04	.0138	4.5995E-04	.0154	.4000	.750
62	539	.585	.092	1.280E-04	.0043	1.5501E-04	.0052	1.7334E-04	.0058	.4000	0
63	544	5.540	.997	1.382E-03	.0462	1.6853E-03	.0565	1.8864E-03	.0632	.4500	-1.000
64	542	2.408	.445	6.167E-04	.0206	8.1816E-04	.0274	9.1553E-04	.0307	.4500	1.000
65	541	1.949	.361	5.007E-04	.0168	6.0646E-04	.0203	6.7896E-04	.0228	.4500	.990
66	540	.989	.183	2.538E-04	.0085	3.0763E-04	.0103	3.4409E-04	.0115	.5000	-0
67	541	1.639	.312	4.138E-04	.0145	5.2589E-04	.0176	5.8835E-04	.0197	.5000	-.277
68	542	3.054	.599	8.331E-04	.0419	1.0103E-03	.0339	1.1305E-03	.0379	.5000	-.553
69	544	5.285	.948	1.365E-03	.0458	1.6569E-03	.0555	1.8541E-03	.0621	.5000	-.830
70	546	8.070	1.542	2.154E-03	.0722	2.6131E-03	.0876	2.9243E-03	.0981	.5000	-1.000
72	542	2.529	.510	7.080E-04	.0237	8.5925E-04	.0288	9.6146E-04	.0322	.5000	1.000
73	540	1.707	.316	4.378E-04	.0147	5.3056E-04	.0178	5.9343E-04	.0199	.5000	.886
74	540	1.116	.200	2.767E-04	.0093	3.3534E-04	.0112	3.7505E-04	.0126	.5000	.640
75	539	1.562	.290	3.980E-04	.0130	4.7001E-04	.0158	5.2557E-04	.0176	.5000	0
76	540	.919	.169	2.061E-04	.0069	2.4975E-04	.0084	2.7936E-04	.0094	.5500	-0
77	538	1.584	.250	3.462E-04	.0116	4.1936E-04	.0141	4.6889E-04	.0157	.5500	-1.000
78	539	1.493	.303	4.149E-04	.0141	5.0285E-04	.0170	5.6876E-04	.0191	.5500	1.000
79	537	1.212	.224	3.089E-04	.0104	3.7401E-04	.0125	4.1807E-04	.0140	.5500	.935
80	537	.791	.150	2.078E-04	.0070	2.5160E-04	.0084	2.8128E-04	.0094	.6000	-0
81	539	1.374	.284	3.930E-04	.0132	4.7614E-04	.0160	5.3243E-04	.0178	.6000	-.449
83	541	4.002	.744	1.048E-03	.0365	1.3191E-03	.0442	1.4756E-03	.0494	.6000	-.748
84	535	.919	.104	1.439E-04	.0048	1.7371E-04	.0058	1.9412E-04	.0065	.6000	-1.000
85	539	.776	.139	1.926E-04	.0065	2.3334E-04	.0078	2.6093E-04	.0087	.6000	1.000
86	538	.931	.177	2.449E-04	.0082	2.9656E-04	.0099	3.3155E-04	.0111	.6000	.907
87	537	1.277	.222	3.063E-04	.0103	3.7092E-04	.0124	4.1462E-04	.0139	.6000	0
88	539	.679	.122	1.689E-04	.0056	2.0414E-04	.0068	2.2824E-04	.0077	.6500	-0
89	539	.570	.105	1.459E-04	.0049	1.7671E-04	.0059	1.9760E-04	.0066	.7000	-0
90	539	1.154	.226	3.131E-04	.0105	3.7941E-04	.0127	4.2433E-04	.0142	.7000	-.235
91	540	1.851	.363	5.029E-04	.0169	6.0948E-04	.0204	6.8173E-04	.0228	.7000	-.469
92	542	2.415	.447	6.221E-04	.0208	7.5442E-04	.0253	8.4420E-04	.0283	.7000	-.704
93	541	2.622	.528	7.332E-04	.0246	8.8883E-04	.0298	9.9435E-04	.0333	.7000	-.848
94	539	.837	.182	2.521E-04	.0084	3.0561E-04	.0102	3.4154E-04	.0114	.7000	1.000
95	537	.715	.128	1.771E-04	.0059	2.1448E-04	.0072	2.3978E-04	.0080	.7000	.908
96	537	1.080	.194	2.673E-04	.0090	3.2361E-04	.0108	3.6175E-04	.0121	.7000	0
97	539	.496	.092	1.270E-04	.0043	1.5382E-04	.0052	1.7201E-04	.0058	.7500	-0
98	538	.462	.080	1.111E-04	.0037	1.3459E-04	.0045	1.5049E-04	.0050	.8000	-0

GROUP
104

5/29/71

AEDC(AMO)INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
90 INCH HYPERSONIC TUNNEL H
V1116J

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
41	1	AAM-U&U	7.99	167.3	1242	20.01	1.99	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	XREF-FM (IN= .009FT)	SIRM (IN= .009FT)	SWITCH POSITION
91.3	.018M	.774	3717	1.6955E-05	7.3*HE-0M	8.497E 05	3.02HE-02	6.419E-02	1

TC NO	IW	D(MC)	Q-DOT	H(10)	H(10)/HREF	H(.910)	H(.910)/HREF	H(.850)	H(.850)/HREF	FUSELAGE A/L	FUSELAGE Y/YMAX
1	534	92.745	16.HA7	2.523E-02	.HB33	3.0992E-02	1.0239	3.4983E-02	1.1553	0	0
2	535	52.31M	9.607	1.252E-02	.4135	1.52H2E-02	.5047	1.7176E-02	.5672	.0100	-0
3	536	28.914	4.577	6.573E-03	.2171	7.9994E-03	.2642	H.9732E-03	.2963	.0100	-.441
4	539	9.952	1.516	2.147E-03	.0712	2.6201E-03	.0869	2.9351E-03	.0969	.0100	-1.000
5	535	2.5H0	.400	5.A50E-04	.0187	6.852HE-04	.0226	7.6095E-04	.0253	.0100	0
6	548	35.510	6.01E	8.664E-03	.2863	1.055HE-02	.3447	1.1849E-02	.3913	.0200	-0
7	546	29.1H0	5.258	7.554E-03	.2495	9.1952E-03	.3037	1.0316E-02	.3407	.0300	-0
H	544	24.919	4.349	6.237E-03	.2054	7.5H09E-03	.2506	H.5011E-03	.2808	.0300	-.303
9	549	H.445	1.332	1.H96E-03	.0H26	2.3032E-03	.0761	2.5802E-03	.0852	.0300	-1.000
10	535	1.93H	.347	H.9099E-04	.0182	5.9543E-04	.0197	H.6642E-04	.0220	.0300	0
11	545	23.940	4.703	6.747E-03	.2228	8.2102E-03	.2711	9.2085E-03	.3041	.0400	-0
12	541	18.22H	3.581	4.53HF-03	.1499	5.5157E-03	.1822	6.1813E-03	.2041	.0500	-0
13	542	15.H62	3.131	4.475E-03	.1478	5.4405E-03	.1797	H.09H5E-03	.2014	.0500	-.310
14	549	H.056	1.602	1.993E-03	.0658	2.4204E-03	.0799	2.7111E-03	.0895	.0500	-1.000
15	535	1.4E0	.305	H.11HE-04	.0143	5.437HE-04	.0171	H.H619E-04	.0194	.0500	0
16	540	10.452	1.H09	2.579E-03	.0852	3.133HE-03	.1035	3.5115E-03	.1160	.0800	-0
17	548	10.417	1.756	2.496E-03	.0824	3.0312E-03	.1001	3.3951E-03	.1121	.0800	-.380
1H	535	H.0B5	.7H8	1.110E-03	.036H	1.3935E-03	.0447	1.5151E-03	.0500	.0800	-1.000
19	534	7.591	1.400	1.H77E-03	.0853	2.3479E-03	.0792	2.6H33E-03	.0886	.1000	-0
20	537	9.777	.744	1.055E-03	.034H	1.2H00E-03	.0423	1.4331E-03	.0473	.1000	-.383
21	537	H.669	1.412	2.002E-03	.0661	2.4796E-03	.0H02	2.7203E-03	.0898	.1000	-.817
22	533	3.370	.603	H.499E-04	.0281	1.0303E-03	.0340	1.1526E-03	.0381	.1000	-1.000
23	533	.927	.166	2.337E-04	.0077	2.H325E-04	.0094	3.168HE-04	.0105	.1000	.783
24	533	.717	.136	1.917E-04	.0063	2.J243E-04	.0077	2.6002E-04	.0086	.1000	0
25	532	7.320	1.468	2.067E-03	.0683	2.5052E-03	.0827	2.H023E-03	.0925	.1500	-.893
26	528	3.35J	.652	H.124E-04	.0401	1.5044E-03	.0365	1.6234E-03	.0408	.1500	-1.000
27	529	.81H	.155	2.167E-04	.0072	2.6242E-04	.0087	2.9335E-04	.0097	.1500	.664
28	529	1.157	.1H2	2.548E-04	.0084	3.0859E-04	.0102	3.4500E-04	.0114	.1500	0
29	523	6.005	1.068	1.4H6E-03	.0491	1.79H7E-03	.0593	2.0062E-03	.0663	.2000	-0
30	524	7.059	1.488	2.073E-03	.0685	2.5067E-03	.0H28	2.7997E-03	.0925	.2000	-.278
31	525	H.335	1.709	2.3H3F-03	.0787	2.8819E-03	.0952	3.21H9E-03	.1063	.2000	-.466
32	525	7.5E0	1.474	2.056E-03	.0679	2.4H61E-03	.0821	2.7770E-03	.0917	.2000	-.792
33	525	3.702	.659	H.188E-04	.0303	1.1112E-03	.0367	1.2411E-03	.0410	.2000	-1.000
34	528	.365	.069	H.665E-05	.0032	1.1699E-04	.0039	1.3075E-04	.0043	.2000	.886
35	529	1.472	.263	3.6H2E-04	.0122	H.4577E-04	.0147	4.9828E-04	.0165	.2000	0
36	530	3.1E9	.508	7.139E-04	.0236	8.0474E-04	.0286	H.6693E-04	.0319	.2100	0
37	531	5.4B6	.9H1	1.J80F-03	.0356	1.2721E-03	.0H52	1.H70HE-03	.0H18	.2200	0
3H	531	5.231	.H22	1.150E-03	.0382	1.4014E-03	.0463	1.5073E-03	.0518	.2300	0
39	529	1.221	.250	3.504F-04	.0116	4.243HE-04	.0140	H.7444E-04	.0157	.2400	.486
40	529	2.141	.33E	H.712E-04	.0156	5.7062E-04	.018H	H.3791E-04	.0211	.2500	0
41	528	.3E1	.072	1.012E-04	.0033	1.2251E-04	.0040	1.3693E-04	.0045	.2700	.485
42	52H	.447	.099	1.394E-04	.0046	1.6874E-04	.0056	1.H866E-04	.0062	.2700	.485
43	529	1.061	.161	2.254E-04	.0074	2.7296E-04	.0090	3.0514E-04	.0101	.2700	0
44	521	H.9E3	.859	1.192E-03	.0394	1.H39VE-03	.0476	1.6072E-03	.0531	.3000	-0
45	523	6.030	1.105	1.H38E-03	.0507	1.8565E-03	.0613	2.0727E-03	.0685	.3000	-.312
46	524	H.127	1.666	2.320E-03	.0766	2.8055E-03	.0927	3.1332E-03	.1035	.3000	-.504
47	525	7.16H	1.044	1.456F-03	.0481	1.7616E-03	.0582	1.9677E-03	.0650	.3000	-.857
48	524	H.134	.691	H.A26F-04	.031H	1.1639E-03	.0384	1.2999E-03	.0429	.3000	-1.000
49	526	1.55H	.302	H.224F-04	.0139	5.1097E-04	.0169	H.7085E-04	.0189	.3000	.983
50	526	.83H	.162	2.266E-04	.0075	2.7423E-04	.0091	3.0639E-04	.0101	.3000	.853
51	527	.141	.039	5.47HF-05	.0018	H.0301E-05	.0022	7.4090E-05	.0024	.3000	.433
52	52H	.141	.039	5.H83F-05	.0018	H.0365E-05	.0022	7.4171E-05	.0024	.3000	.381
53	528	.52H	.0H5	1.240E-04	.0041	1.5011E-04	.0050	1.677HE-04	.0055	.3000	0
54	521	3.0E3	.710	H.HA0F-04	.0326	1.1913E-03	.0393	1.3298E-03	.0439	.4000	-0
55	522	5.032	.9H0	1.360F-03	.0444	1.6435E-03	.0543	1.H346E-03	.0606	.4000	-.321
56	523	7.035	1.365	1.H98E-03	.0467	2.4947E-03	.0758	2.5621E-03	.0846	.4000	-.926
57	526	H.37H	1.620	2.262F-03	.0747	2.736HE-03	.0904	3.0574E-03	.1010	.4000	-.951
58	524	5.4E9	.977	1.361E-03	.0449	1.6457E-03	.0543	1.83H0E-03	.0607	.4000	-1.000
59	523	2.B53	.539	7.499F-04	.024H	H.964JE-04	.0299	1.0120E-03	.0334	.4000	1.000
60	525	1.3E1	.241	3.359F-04	.0111	H.0H26E-04	.0134	4.53J3E-04	.0150	.4000	.906
61	525	.402	.072	H.990F-05	.0033	1.20H4E-04	.0040	1.3494E-04	.0045	.4000	.750
62	527	.001	.094	1.318E-04	.0044	1.5957E-04	.0053	1.7832E-04	.0059	.4000	0
63	525	5.22H	.931	1.299F-03	.0429	1.5717E-03	.0519	1.7597E-03	.0580	.4500	-1.000
64	525	2.347	.469	6.534F-04	.0216	7.9020E-04	.0261	H.H261E-04	.0291	.4500	1.000
65	526	1.2E1	.235	3.2HIE-04	.0109	3.976VE-04	.0131	4.4433E-04	.0147	.4500	.990
66	527	3.235	.594	H.314F-04	.0275	1.0062E-03	.0332	1.1244E-03	.0371	.5000	-0
67	527	3.63H	.6H7	H.621E-04	.031H	1.1645E-03	.0385	1.3014E-03	.0430	.5000	-.277
6H	528	5.220	1.01E	1.422E-03	.0470	1.7217E-03	.0569	1.92H2E-03	.0635	.5000	-.553
69	530	H.2H4	1.524	2.141F-03	.0707	2.5929E-03	.0856	2.8991E-03	.0957	.5000	-.830
70	531	9.346	1.772	2.493F-03	.0823	3.0207E-03	.0998	3.3785E-03	.1116	.5000	-1.000
72	527	2.352	.470	H.578E-04	.0217	7.95H5E-04	.0263	H.H934E-04	.0294	.5000	1.000
73	527	1.00H	.1H5	2.5H3E-04	.0095	3.1258E-04	.0103	3.4933E-04	.0115	.5000	.886
74	527	.421	.079	1.051F-04	.0035	1.2726E-04	.0042	1.4221E-04	.0047	.5000	.640
75	528	.B74	.121	1.647E-04	.0056	2.0551E-04	.0068	2.2971E-04	.0076	.5000	0
76	532	3.211	.522	7.352E-04	.0243	H.9107E-04	.0294	9.9877E-04	.0329	.5500	-0
77	528	1.436	.225	3.152E-04	.0104	3.8147E-04	.0126	4.2632E-04	.0141	.5500	-1.000
78	528	1.130	.262	3.668E-04	.0121	4.4404E-04	.0147	4.9630E-04	.0164	.5500	1.000
79	527	.92H	.171	2.395E-04	.0079	2.8857E-04	.0095	3.2246E-04	.0106	.5500	.935
H0	531	2.B67	.565	7.728E-04	.0255	9.J63VE-04	.0309	1.0473E-03	.0346	.6000	-0
H1	532	2.974	.612	H.417E-04	.0289	1.0463E-03	.0345	1.16H1E-03	.0386	.6000	-.269
H3	534	6.917	1.351	1.907E-03	.0630	2.3129E-03	.0764	2.5881E-03	.0855	.6000	-.748
H4	528	.52H	.106	1.4A0E-04	.0049	1.7912E-04	.0059	2.0019E-04	.0066	.6000	-1.000
H5	530	1.044	.1H7	2.421F-04	.0087	3.1746E-04	.0105	3.549HE-04	.0117	.6000	1.000
H6	529	.708	.134	1.H78E-04	.0062	2.2J73E-04	.0075	2.5418E-04	.0084	.6000	.907
H7	528	.813	.151	2.117E-04	.0070	2.5626E-04	.0085	2.H643E-04	.0095	.6000	0
H8	534	2.702	.4H4	H.A26E-04	.0225	H.2771E-04	.0273	9.2015E-04	.0306	.6500	-0
H9	536	2.51H	.464	6.555E-04	.0216	7.9492E-04	.0263	H.H950E-04	.0294	.7000	-0
90	534	2.54H	.498	7.027E-04	.0232	H.5216E-04	.0281	9.5357E-04	.0315	.7000	-.235
91	534	3.106	.607	H.575E-04	.0283	1.0401E-03	.0343	1.1640E-03	.0384	.7000	-.469
92	536	3.732	.6H9	9.770E-04	.0323	1.1858E-03	.0392	1.3276E-03	.0438	.7000	-.704
93	536	H.70H	.96E	1.339E-03	.0442	1.6244E-03	.0536	1.H18JE-03	.0601	.7000	-.848
94	532	.744	.161	H.273E-04	.0075	2.7555E-04	.0091	3.0825E-04	.0102	.7000	1.000
95	531	.962	.172	2.418F-04	.0080	2.929HE-04	.0097	3.2766E-04	.0108	.7000	.908
96	530	.825	.147	2.069E-04	.0068	2.5058E-04	.0083	2.8017E-04	.0093	.7000	0
97	535	2.050	.378	5.350E-04	.0177	6.4897E-04	.0214	7.2636E-04	.0240	.7500	-0
98	534	2.334	.405	5.718E-04	.0189	6.9336E-04	.0229	7.7579E-04	.0256	.8000	-0

NOT REPRODUCIBLE

365998

GROUP
105

AEDC(AMO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
41	F	KAM-U#0	7.94	165.0	1237	20.00	2.00	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	PREF-PH (IN=.009FT)	SIPH (IN=.009FT)	SWITCH POSITION
90.9	.011M	.0183	3709.	1.693E-09	7.316E-09	8.731E 05	3.005E-02	0.247E-02	2.

TC NO	TW	DT=CJ	Q-OOI	M(IG)	M(IO)/MREF	M(.9IO)/MREF	M(.85IO)/MREF	M(.85IO)/MREF
FUSELAGE								A/L Y/YMAX
99	543	2.205	.418	5.947E-04	.0194	7.2155E-04	.0240	8.0764E-04 .0269	.8000 -.223
100	533	2.419	.459	6.525E-04	.0217	7.9172E-04	.0263	8.8625E-04 .0295	.8000 -.446
101	537	3.018	.623	8.894E-04	.0296	1.0802E-03	.0359	1.2099E-03 .0403	.8000 -.669
102	537	2.887	.596	8.521E-04	.0286	1.0351E-03	.0346	1.1597E-03 .0386	.8000 -.806
103	534	1.624	.317	4.516E-04	.0150	5.4868E-04	.0182	6.1465E-04 .0204	.8500 -0
104	535	1.305	.234	3.328E-04	.0111	4.0391E-04	.0134	4.5226E-04 .0151	.9000 -0
105	534	1.297	.251	3.609E-04	.0120	4.3732E-04	.0146	4.8968E-04 .0163	.9000 -.226
106	534	1.457	.288	4.166E-04	.0139	5.0703E-04	.0169	5.6782E-04 .0189	.9000 -.452
107	535	1.104	.217	3.146E-04	.0104	3.8107E-04	.0127	4.2700E-04 .0143	.9000 -.678
108	535	1.961	.368	5.210E-04	.0173	6.3296E-04	.0211	7.0836E-04 .0236	.9000 -.817
109	543	.134	.028	3.918E-05	.0013	4.7537E-05	.0016	5.3208E-05 .0018	.9000 1.000
110	531	.587	.108	1.648E-04	.0049	1.8023E-04	.0060	2.0185E-04 .0067	.9000 .884
111	531	.154	.025	3.542E-05	.0012	4.2939E-05	.0014	4.8038E-05 .0016	.9000 .610
112	534	1.167	.214	3.045E-04	.0101	3.6954E-04	.0123	4.1374E-04 .0138	.9500 -0
114	534	1.610	.306	4.347E-04	.0145	5.2754E-04	.0176	5.9059E-04 .0197	.9900 -0
115	535	1.615	.296	4.215E-04	.0140	5.1156E-04	.0170	5.7279E-04 .0191	.9900 -.253
116	534	1.568	.306	4.359E-04	.0145	5.2905E-04	.0176	5.9235E-04 .0197	.9900 -.507
117	535	1.577	.302	4.305E-04	.0146	5.3218E-04	.0177	5.9587E-04 .0198	.9900 -.660
118	535	1.685	.302	4.299E-04	.0143	5.2190E-04	.0174	5.8441E-04 .0194	.9900 -.793
119	531	.192	.031	5.251E-05	.0017	6.3650E-05	.0021	7.1268E-05 .0024	.9900 .780
120	528	.154	.018	2.473E-05	.0008	2.9954E-05	.0010	3.3496E-05 .0011	.9900 .605
LOWER WING SURFACE								A/C Y/S	
121	543	21.335	4.070	5.868E-03	.1952	7.1361E-03	.2375	8.0040E-03 .2664	0 .050
122	549	26.374	4.471	6.449E-03	.2162	7.9183E-03	.2639	8.8923E-03 .2959	0 .100
124	542	5.939	1.068	1.535E-03	.0511	1.8676E-03	.0621	2.0942E-03 .0697	.2000 .100
126	535	2.110	.355	5.063E-04	.0168	6.1468E-04	.0205	6.8836E-04 .0229	.6000 .100
127	535	2.325	.416	5.929E-04	.0197	7.1964E-04	.0239	8.0577E-04 .0268	.7000 .100
128	533	2.514	.341	4.851E-04	.0161	5.8852E-04	.0196	6.5875E-04 .0219	.9000 .100
134	548	28.324	5.728	8.311E-03	.2766	1.0129E-02	.3371	1.1373E-02 .3785	0 .150
135	547	26.865	4.835	7.005E-03	.2331	8.5339E-03	.2840	9.5796E-03 .3188	0 .250
136	544	11.791	2.122	3.063E-03	.1019	3.7292E-03	.1241	4.1838E-03 .1392	.1000 .250
137	543	7.457	1.260	1.816E-03	.0604	2.2103E-03	.0736	2.4792E-03 .0825	.2000 .250
138	541	4.134	.766	1.101E-03	.0366	1.3395E-03	.0446	1.5019E-03 .0500	.4000 .250
140	539	3.204	.598	7.995E-04	.0266	9.7187E-04	.0323	1.0893E-03 .0362	.6000 .250
142	535	1.952	.316	4.527E-04	.0151	5.4967E-04	.0183	6.1625E-04 .0205	.9000 .250
147	550	23.876	4.441	6.463E-03	.2151	7.8822E-03	.2623	8.8560E-03 .2946	0 .450
148	546	12.691	2.276	3.295E-03	.1097	4.0138E-03	.1336	4.5052E-03 .1499	.1000 .450
149	549	23.814	4.391	6.383E-03	.2126	7.7829E-03	.2590	8.7412E-03 .2909	0 .500
150	546	12.657	2.448	3.599E-03	.1198	4.3842E-03	.1459	4.9205E-03 .1637	.1000 .500
151	544	7.319	1.436	2.073E-03	.0690	2.5233E-03	.0840	2.8309E-03 .0942	.2000 .500
152	544	5.907	1.031	1.488E-03	.0495	1.8120E-03	.0603	2.0330E-03 .0677	.4000 .500
154	540	3.955	.710	1.019E-03	.0339	1.2396E-03	.0412	1.3883E-03 .0462	.6000 .500
156	538	2.955	.486	6.962E-04	.0232	8.4936E-04	.0282	9.4879E-04 .0302	.8000 .500
157	535	2.134	.342	5.443E-04	.0181	6.6070E-04	.0220	7.3980E-04 .0246	.9000 .500
163	548	22.255	4.139	6.001E-03	.1997	7.3133E-03	.2434	8.2114E-03 .2733	0 .550
164	548	14.855	2.760	4.005E-03	.1333	4.8815E-03	.1624	5.4810E-03 .1824	.1000 .550
165	550	22.441	4.185	6.042E-03	.2027	7.4304E-03	.2473	8.3471E-03 .2778	0 .600
166	547	16.310	2.940	4.260E-03	.1418	5.1903E-03	.1727	5.8265E-03 .1939	.1000 .600
167	549	22.787	4.112	5.974E-03	.1988	7.2828E-03	.2424	8.1788E-03 .2722	0 .650
168	547	14.982	2.941	4.264E-03	.1419	5.1957E-03	.1729	5.8331E-03 .1941	.1000 .650
169	550	24.009	4.335	6.311E-03	.2100	7.6977E-03	.2562	8.6473E-03 .2878	0 .700
170	543	7.710	1.387	2.000E-03	.0666	2.4363E-03	.0810	2.7306E-03 .0909	.1000 .700
171	551	26.338	4.756	6.942E-03	.2310	8.4701E-03	.2819	9.5178E-03 .3167	0 .750
172	547	18.249	3.190	4.626E-03	.1539	5.6372E-03	.1876	6.3249E-03 .2104	.1000 .750
173	544	8.584	1.592	2.297E-03	.0765	2.7968E-03	.0931	3.1377E-03 .1044	.2000 .750
175	541	4.948	.997	1.433E-03	.0477	1.7427E-03	.0580	1.9561E-03 .0650	.4000 .750
176	537	3.475	.687	2.380E-04	.0079	2.8913E-04	.0096	3.2392E-04 .0108	.7000 .750
178	537	2.429	.438	6.220E-04	.0207	7.5539E-04	.0251	8.4016E-04 .0282	.8000 .750
183	545	10.588	1.502	2.171E-03	.0722	2.6430E-03	.0880	2.9658E-03 .0987	0 .900
184	543	8.936	1.607	2.316F-03	.0771	2.8186E-03	.0938	3.1616E-03 .1052	.2000 .900
185	538	4.908	.719	1.029E-03	.0342	1.2492E-03	.0416	1.3997E-03 .0466	.6000 .900
186	536	3.187	.571	8.150E-04	.0271	9.8972E-04	.0329	1.1095E-03 .0369	.8000 .900
UPPER WING SURFACE								A/C Y/S	
129	547	1.408	.214	3.063E-04	.0102	3.7213E-04	.0124	4.1691E-04 .0139	.1000 .100
130	536	.490	.092	1.178E-04	.0039	1.4283E-04	.0048	1.5997E-04 .0053	.2000 .100
131	535	.291	.058	7.652E-05	.0025	9.2891E-05	.0031	1.0402E-04 .0035	.4000 .100
132	533	.172	.033	4.436E-05	.0015	5.6240E-05	.0019	6.2952E-05 .0021	.7000 .100
133	532	.024	.004	5.749E-06	.0002	7.020HE-06	.0002	7.8566E-06 .0003	.9000 .100
143	539	2.114	.425	6.092E-04	.0203	7.4041E-04	.0246	8.2974E-04 .0276	.1000 .250
145	536	.408	.068	9.764E-05	.0032	1.1857E-04	.0039	1.3280E-04 .0044	.4000 .250
146	533	.261	.049	6.912E-05	.0023	8.3847E-05	.0028	9.3847E-05 .0031	.9000 .250
158	539	2.197	.335	4.790E-04	.0160	5.8298E-04	.0194	6.5336E-04 .0217	.1000 .500
159	539	1.734	.290	4.155F-04	.0138	5.0504E-04	.0168	5.6604E-04 .0188	.2000 .500
160	539	.907	.148	2.120F-04	.0071	2.5761E-04	.0086	2.8864E-04 .0096	.4000 .500
161	535	.304	.053	7.613F-05	.0025	9.1200E-05	.0030	1.0212E-04 .0034	.8000 .500
162	532	.520	.070	9.982E-05	.0033	1.2105E-04	.0040	1.3546E-04 .0045	.9000 .500
179	539	4.743	.852	1.221E-03	.0406	1.4840E-03	.0494	1.6612E-03 .0553	.1000 .750
180	538	2.000	.359	5.139F-04	.0171	6.2437E-04	.0208	6.9916E-04 .0233	.2000 .750
181	537	.960	.123	1.761E-04	.0059	2.1390E-04	.0071	2.3964E-04 .0080	.4000 .750
182	533	.331	.056	7.908E-05	.0026	9.5943E-05	.0032	1.0739E-04 .0036	.8000 .750
VERTICAL STABILIZER								A/C Z/S	
187	535	4.616	.752	1.071E-03	.0356	1.3000E-03	.0433	1.4557E-03 .0484	0 .100
188	531	1.104	.192	2.716E-04	.0090	3.2978E-04	.0110	3.6837E-04 .0123	.1000 .100
189	530	.265	.046	6.755E-05	.0022	8.1871E-05	.0027	9.1581E-05 .0030	.4000 .100
191	530	.121	.023	3.257E-05	.0011	3.9475E-05	.0013	4.4160E-05 .0015	.8000 .100
192	536	3.846	.731	1.042E-03	.0347	1.2648E-03	.0421	1.4164E-03 .0471	0 .250
193	532	1.884	.327	4.631E-04	.0154	5.6168E-04	.0187	6.2856E-04 .0209	.1000 .250
194	531	.221	.037	5.259E-05	.0017	6.3763E-05	.0021	7.1346E-05 .0024	.4000 .250
195	531	.132	.024	3.348E-05	.0011	4.0593E-05	.0014	4.5415E-05 .0015	.8000 .250
197	535	4.205	.776	1.106E-03	.0368	1.3431E-03	.0447	1.5041E-03 .0501	.1000 .500
198	534	.492	.088	1.253F-04	.0042	1.5206E-04	.0051	1.7024E-04 .0057	.4000 .500
200	532	.170	.030	4.316F-05	.0014	5.2339E-05	.0017	5.8567E-05 .0019	.8000 .500
201	542	6.146	1.172	1.686E-03	.0561	2.0503E-03	.0682	2.2991E-03 .0765	0 .750
202	536	5.887	.671	9.589E-04	.0319	1.1640E-03	.0387	1.3037E-03 .0434	.1000 .750
203	534	.869	.078	1.084E-04	.0036	1.3151E-04	.0044	1.4721E-04 .0049	.4000 .750
204	532	.683	.081	1.154F-04	.0038	1.4001E-04	.0047	1.5668E-04 .0052	.8000 .750

GROUP
105

366002

366003

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
42	7	AAR-UNO	7.94	165.8	1232	30.02	-8.02	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (H= .009FT)	SIFR (H= .009FT)	SWITCH POSITION
90.5	.018	.787	3702	1.653E-05	7.289E-08	8.40E 06	3.010E-02	6.217E-02	1

TC NO	TW	DTWCT	Q-DOT	H(TO)	H(TO)/HREF	H(.9TO)	H(.9TO)/HREF	H(.85TO)	H(.85TO)/HREF	FUSELAGE X/L	FUSELAGE Y/YMAX
1	570	66.570	15.795	2.386E-02	.7928	2.937AE-02	.9761	3.3110E-02	1.0999	0	0
2	549	60.434	9.966	1.480E-02	.4918	1.8170E-02	.6038	2.0486E-02	.6779	.0100	-0
3	550	36.833	5.866	8.578E-03	.2850	1.0471E-02	.3478	1.1769E-02	.3910	.0100	-.441
4	541	9.848	1.592	2.173E-03	.0722	2.6652E-03	.0879	2.9672E-03	.0986	.0100	-1.000
5	536	1.689	.266	3.823E-04	.0127	4.6450E-04	.0154	5.2048E-04	.0173	.0100	0
6	553	43.394	7.373	1.087E-02	.3610	1.3276E-02	.4410	1.4933E-02	.4961	.0200	-0
7	541	29.854	7.201	1.058E-02	.3514	1.2915E-02	.4290	1.4519E-02	.4823	.0300	-0
8	549	32.583	5.702	8.380E-03	.2774	1.0188E-02	.3384	1.1448E-02	.3803	.0300	-.303
9	540	8.098	1.278	1.845E-03	.0613	2.2445E-03	.0746	2.5169E-03	.0836	.0300	-1.000
10	536	1.119	.200	2.879E-04	.0096	3.4987E-04	.0116	3.9203E-04	.0130	.0300	0
11	550	33.114	5.524	7.972E-03	.2180	1.1684E-02	.3881	1.3137E-02	.4363	.0400	-0
12	547	22.949	4.512	6.586E-03	.2187	8.0743E-03	.2666	9.0140E-03	.2994	.0900	-0
13	546	21.581	4.241	6.178E-03	.2052	7.5798E-03	.2501	8.4945E-03	.2809	.0500	-.310
14	541	8.277	1.442	2.086E-03	.0693	2.5384E-03	.0843	2.8471E-03	.0946	.0500	-1.000
15	537	1.069	.221	3.173E-04	.0105	3.85A3E-04	.0128	4.3219E-04	.0144	.0500	0
16	545	22.970	2.881	4.197E-03	.1394	5.1145E-03	.1699	5.7419E-03	.1907	.0800	-0
17	544	15.021	2.540	3.692E-03	.1227	4.4978E-03	.1494	5.0485E-03	.1677	.0800	-.360
18	538	4.468	.793	1.085E-03	.0361	1.3198E-03	.0438	1.4795E-03	.0491	.0800	-1.000
19	542	11.909	2.131	3.087E-03	.1025	3.7573E-03	.1248	4.2151E-03	.1400	.1000	-0
20	544	19.411	1.177	1.711E-03	.0568	2.0841E-03	.0692	2.3492E-03	.0777	.1000	-.383
21	544	11.882	1.944	2.829E-03	.0938	3.4405E-03	.1143	3.8615E-03	.1283	.1000	-.817
22	537	3.217	.577	8.292E-04	.0275	1.0077E-03	.0335	1.1293E-03	.0375	.1000	-1.000
23	534	.577	.103	1.480E-04	.0049	1.7966E-04	.0060	2.0122E-04	.0067	.1000	.783
24	535	1.197	.227	3.261E-04	.0108	3.9606E-04	.0132	4.4368E-04	.0147	.1000	0
25	540	9.832	1.980	2.860E-03	.0950	3.4792E-03	.1156	3.9017E-03	.1296	.1500	-.893
26	533	3.483	.674	9.643E-04	.0320	1.1707E-03	.0389	1.3110E-03	.0436	.1500	-1.000
27	530	.487	.087	1.234E-04	.0041	1.4996E-04	.0050	1.6746E-04	.0056	.1500	.664
28	532	1.555	.244	3.492E-04	.0116	4.2387E-04	.0141	4.7456E-04	.0158	.1500	0
29	538	9.619	1.724	2.483E-03	.0825	3.0180E-03	.1003	3.3828E-03	.1124	.2000	-0
30	539	11.250	2.202	3.176E-03	.1055	3.8619E-03	.1283	4.3295E-03	.1438	.2000	-.278
31	539	12.130	2.547	3.617E-03	.1202	4.3993E-03	.1461	4.9324E-03	.1639	.2000	-.466
32	537	9.545	1.867	2.687E-03	.0893	3.2662E-03	.1085	3.6606E-03	.1216	.2000	-.792
33	536	3.926	.763	1.007E-03	.0334	1.2224E-03	.0406	1.3691E-03	.0455	.2000	-1.000
34	529	.481	.091	1.295E-04	.0043	1.5701E-04	.0052	1.7587E-04	.0058	.2000	.888
35	530	1.719	.307	4.372E-04	.0145	5.3028E-04	.0176	5.9342E-04	.0197	.2000	0
36	531	3.134	.596	7.264E-04	.0241	8.8121E-04	.0293	9.8631E-04	.0328	.2100	0
37	532	4.951	.885	1.264E-03	.0420	1.5341E-03	.0510	1.7174E-03	.0571	.2200	0
38	531	3.495	.549	7.833E-04	.0260	9.5042E-04	.0316	1.0639E-03	.0353	.2300	0
39	529	1.412	.275	3.908E-04	.0130	4.7382E-04	.0157	5.3011E-04	.0176	.2400	.486
40	529	1.671	.262	3.729E-04	.0124	4.5217E-04	.0150	5.0593E-04	.0168	.2500	0
41	528	.367	.077	1.099E-04	.0037	1.3323E-04	.0044	1.4905E-04	.0050	.2700	.465
42	528	.417	.084	1.187E-04	.0039	1.4389E-04	.0048	1.6098E-04	.0053	.2700	.465
43	529	.780	.118	1.681E-04	.0056	2.0386E-04	.0068	2.2810E-04	.0076	.2700	0
44	540	7.634	1.329	1.921E-03	.0638	2.3368E-03	.0776	2.6205E-03	.0871	.3000	-0
45	541	8.118	1.503	2.173E-03	.0722	2.6445E-03	.0879	2.9660E-03	.0985	.3000	-.312
46	543	10.924	2.263	3.282E-03	.1090	3.9965E-03	.1328	4.4845E-03	.1490	.3000	-.504
47	541	8.185	1.203	1.741E-03	.0578	2.1181E-03	.0704	2.3757E-03	.0789	.3000	-.857
48	536	4.567	.769	1.104E-03	.0367	1.3420E-03	.0446	1.5037E-03	.0500	.3000	-1.000
49	530	1.349	.262	3.729E-04	.0124	4.5227E-04	.0150	5.0613E-04	.0168	.3000	.983
50	529	.731	.142	2.026E-04	.0067	2.4566E-04	.0082	2.7488E-04	.0091	.3000	.853
51	528	.218	.045	6.357E-05	.0021	7.7040E-05	.0026	8.6203E-05	.0029	.3000	.433
52	528	.167	.034	4.876E-05	.0016	5.9116E-05	.0020	6.6135E-05	.0022	.3000	.361
53	528	.459	.083	1.180E-04	.0039	1.4304E-04	.0048	1.6002E-04	.0053	.3000	0
54	541	5.849	1.146	1.658E-03	.0551	2.0178E-03	.0670	2.2632E-03	.0752	.4000	-0
55	541	6.990	1.344	1.974E-03	.0656	2.4025E-03	.0798	2.6948E-03	.0895	.4000	-.321
56	543	9.306	1.826	2.649E-03	.0880	3.2262E-03	.1072	3.6202E-03	.1203	.4000	-.526
57	544	9.787	1.768	2.481E-03	.0824	3.0216E-03	.1004	3.3913E-03	.1127	.4000	-.951
58	539	5.601	1.005	1.450E-03	.0482	1.7627E-03	.0586	1.9762E-03	.0657	.4000	-1.000
59	536	2.491	.473	6.802E-04	.0226	8.2642E-04	.0275	9.2598E-04	.0308	.4000	1.000
60	530	1.092	.195	2.777E-04	.0092	3.3680E-04	.0112	3.7691E-04	.0125	.4000	.906
61	529	.479	.085	1.216E-04	.0040	1.4745E-04	.0049	1.6497E-04	.0055	.4000	.750
62	528	.412	.065	9.182E-05	.0031	1.1131E-04	.0037	1.2453E-04	.0041	.4000	0
63	540	5.782	1.039	1.501E-03	.0499	1.8259E-03	.0607	2.0477E-03	.0680	.4500	-1.000
64	537	2.274	.458	6.581E-04	.0219	7.9983E-04	.0266	8.9634E-04	.0298	.4500	1.000
65	531	1.000	.184	2.626E-04	.0087	3.1859E-04	.0106	3.5659E-04	.0118	.4500	.990
66	544	5.678	1.053	1.529E-03	.0508	1.8622E-03	.0619	2.0900E-03	.0694	.5000	-0
67	544	5.931	1.132	1.645E-03	.0546	2.0032E-03	.0665	2.2483E-03	.0747	.5000	-.277
68	545	6.874	1.350	1.965E-03	.0653	2.3940E-03	.0795	2.6875E-03	.0893	.5000	-.553
69	548	10.132	1.883	2.751E-03	.0914	3.3548E-03	.1114	3.7685E-03	.1252	.5000	-.830
70	547	9.534	1.823	2.663E-03	.0885	3.2467E-03	.1079	3.6466E-03	.1211	.5000	-1.000
72	538	2.336	.470	6.769E-04	.0225	8.2297E-04	.0273	9.2249E-04	.0306	.5000	1.000
73	531	.739	.135	1.924E-04	.0064	2.3341E-04	.0078	2.6129E-04	.0087	.5000	.886
74	530	.209	.037	5.307E-05	.0018	6.4376E-05	.0021	7.2047E-05	.0024	.5000	.640
75	530	.491	.088	1.251E-04	.0042	1.5171E-04	.0050	1.6979E-04	.0056	.5000	0
76	545	5.513	.902	1.313F-03	.0436	1.5995E-03	.0531	1.7956E-03	.0597	.5500	-0
77	535	.814	.128	1.838E-04	.0061	2.2334E-04	.0074	2.5021E-04	.0083	.5500	-1.000
78	536	1.518	.231	3.314F-04	.0110	4.0257E-04	.0134	4.5104E-04	.0150	.5500	1.000
79	531	.611	.112	1.603E-04	.0053	1.9450E-04	.0065	2.1769E-04	.0072	.5500	.935
80	543	5.194	.991	1.438E-03	.0478	1.7506E-03	.0582	1.9643E-03	.0653	.6000	-0
81	543	4.942	1.024	1.485E-03	.0493	1.8086E-03	.0601	2.0295E-03	.0674	.6000	-.249
83	547	8.339	1.640	2.396E-03	.0796	2.9216E-03	.0971	3.2817E-03	.1090	.6000	-.748
84	532	.484	.091	1.156E-04	.0038	1.4035E-04	.0047	1.5712E-04	.0052	.6000	-1.000
85	538	1.599	.287	4.131E-04	.0137	5.0223E-04	.0167	5.6296E-04	.0187	.6000	1.000
86	533	.695	.132	1.886E-04	.0063	2.2895E-04	.0076	2.5636E-04	.0085	.6000	.907
87	530	.677	.116	1.660E-04	.0055	2.0115E-04	.0067	2.2534E-04	.0075	.6000	0
88	549	4.683	.843	1.227E-03	.0408	1.4953E-03	.0497	1.6786E-03	.0558	.6500	-0
89	546	4.570	.847	1.231F-03	.0409	1.4987E-03	.0498	1.6820E-03	.0559	.7000	-0
90	546	4.153	.816	1.186E-03	.0394	1.4443E-03	.0480	1.6212E-03	.0539	.7000	-.235
91	546	4.337	.892	1.238E-03	.0411	1.5087E-03	.0501	1.6934E-03	.0563	.7000	-.469
92	548	5.386	1.001	1.464E-03	.0486	1.7864E-03	.0593	2.0070E-03	.0667	.7000	-.704
93	548	5.826	1.178	1.722F-03	.0572	2.0996E-03	.0697	2.3585E-03	.0783	.7000	-.848
94	539	.280	.061	8.776E-05	.0029	1.0674E-04	.0035	1.1968E-04	.0040	.7000	1.000
95	536	1.400	.251	3.592E-04	.0119	4.3628E-04	.0145	4.8868E-04	.0162	.7000	.908
96	531	.602	.108	1.534E-04	.0051	1.8608E-04	.0062	2.0829E-04	.0069	.7000	0
97	543	3.578	.663	9.623E-04	.0320	1.1718E-03	.0389	1.3149E-03	.0437	.7500	-0
98	541	4.899	.854	1.237E-03	.0411	1.5052E-03	.0500	1.6888E-03	.0561	.8000	-0

GROUP
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AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREVEND	ROLL-MODEL	YAW
42	7	NAR-DWG	7.94	165.8	1228	29.54	-1.54	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	HREF-FR (IN .009FT)	STFR (IN .009FT)	SWITCH POSITION
90.2	.018	.787	5696	1.658E-05	7.265E-08	8.44E 05	3.809E-02	6.285E-02	2

TC NO	TW	DTWCT	Q-DOT	M(TO)	M(TO)/HREF	M(.9TO)	M(.9TO)/HREF	M(.85TO)	M(.85TO)/HREF
									FUSELAGE
									X/L Y/YMAX
99	540	3.709	.706	1.027E-03	.0341	1.2497E-03	.0415	1.4021E-03	.0466
100	540	3.812	.726	1.056E-03	.0351	1.2850E-03	.0427	1.4426E-03	.0480
101	544	4.348	.899	1.314E-03	.0437	1.6008E-03	.0532	1.7973E-03	.0597
102	545	4.089	.842	1.232E-03	.0410	1.5027E-03	.0499	1.6877E-03	.0561
103	540	3.072	.602	8.796E-04	.0291	1.0660E-03	.0354	1.1960E-03	.0398
104	540	3.324	.597	8.682E-04	.0289	1.0549E-03	.0351	1.1857E-03	.0394
105	539	2.677	.524	7.619E-04	.0253	9.2679E-04	.0308	1.0396E-03	.0346
106	538	2.443	.478	6.931E-04	.0230	8.4329E-04	.0280	9.4566E-04	.0314
107	541	3.376	.661	8.835E-04	.0294	1.0759E-03	.0358	1.2073E-03	.0401
108	542	3.214	.598	8.679E-04	.0288	1.0566E-03	.0351	1.1859E-03	.0394
109	536	.260	.052	7.958E-05	.0025	9.1891E-05	.0031	1.0301E-04	.0034
110	536	.461	.083	1.189E-04	.0040	1.4444E-04	.0048	1.6183E-04	.0054
111	533	.194	.025	3.440E-05	.0012	4.4284E-05	.0015	4.9512E-05	.0016
112	540	2.486	.474	6.879E-04	.0229	8.3721E-04	.0278	9.3917E-04	.0312
114	539	2.814	.536	7.786E-04	.0259	9.4715E-04	.0315	1.0627E-03	.0353
115	541	3.017	.592	8.408E-04	.0280	1.0476E-03	.0348	1.1755E-03	.0391
116	540	3.004	.589	8.361E-04	.0279	1.0423E-03	.0346	1.1696E-03	.0389
117	540	2.760	.541	7.683E-04	.0261	9.5729E-04	.0318	1.0740E-03	.0357
118	541	2.569	.447	6.796E-04	.0226	8.2751E-04	.0275	9.2855E-04	.0309
119	533	.508	.099	1.418E-04	.0047	1.7224E-04	.0057	1.9295E-04	.0064
120	529	.560	.064	9.108E-05	.0030	1.1049E-04	.0037	1.2367E-04	.0041
									LOWER WING SURFACE
									X/C Y/S
121	536	12.910	2.480	3.688E-03	.1226	4.5115E-03	.1500	5.0788E-03	.1688
122	544	17.326	2.961	4.442E-03	.1483	5.4753E-03	.1820	6.1766E-03	.2053
124	551	7.518	1.358	2.005E-03	.0666	2.4490E-03	.0814	2.7539E-03	.0915
126	543	3.409	.576	8.412E-04	.0280	1.0290E-03	.0341	1.1907E-03	.0382
127	542	3.511	.631	9.205E-04	.0306	1.1213E-03	.0373	1.2586E-03	.0418
128	542	3.854	.695	1.052E-04	.0254	9.3206E-04	.0310	1.0461E-03	.0348
134	562	22.495	4.582	6.877E-03	.2286	8.4315E-03	.2803	9.5054E-03	.3160
135	560	21.694	3.937	5.891E-03	.1958	7.2172E-03	.2399	8.1326E-03	.2703
136	558	15.537	2.816	4.201E-03	.1396	5.1413E-03	.1710	5.7931E-03	.1926
137	553	9.368	1.592	2.366E-03	.0784	2.8850E-03	.0959	3.2463E-03	.1079
138	549	6.512	1.211	1.784E-03	.0593	2.1786E-03	.0724	2.4491E-03	.0814
140	547	4.561	.797	1.171E-03	.0389	1.4294E-03	.0475	1.6061E-03	.0534
142	542	3.263	.433	7.764E-04	.0258	9.4556E-04	.0314	1.0612E-03	.0353
147	544	20.143	3.774	5.681E-03	.1888	6.9490E-03	.2316	7.8603E-03	.2613
148	560	15.465	2.807	4.204E-03	.1397	5.1515E-03	.1712	5.8056E-03	.1930
149	564	21.373	4.009	6.030E-03	.2004	7.3982E-03	.2459	8.3447E-03	.2774
150	559	15.796	3.126	4.672E-03	.1553	5.7217E-03	.1902	6.4462E-03	.2143
151	553	10.214	2.016	2.988E-03	.0993	3.6532E-03	.1214	4.1106E-03	.1366
152	552	7.329	1.245	1.900E-03	.0632	2.3223E-03	.0772	2.6123E-03	.0868
154	547	5.459	.984	1.446E-03	.0481	1.7646E-03	.0587	1.9828E-03	.0659
156	546	3.754	.594	8.711E-04	.0290	1.0623E-03	.0353	1.1933E-03	.0397
157	541	3.101	.547	8.115E-04	.0270	9.8811E-04	.0328	1.1088E-03	.0369
163	560	22.805	4.264	6.379E-03	.2120	7.8154E-03	.2598	8.8065E-03	.2927
164	558	17.311	3.234	4.830E-03	.1605	5.9145E-03	.1966	6.6625E-03	.2215
165	564	20.141	3.773	5.679E-03	.1888	6.9661E-03	.2315	7.8567E-03	.2611
166	560	14.122	3.289	4.922E-03	.1636	6.0307E-03	.2005	6.7958E-03	.2259
167	560	19.214	3.488	5.224E-03	.1736	6.4012E-03	.2128	7.2140E-03	.2398
169	559	16.294	3.226	4.829E-03	.1604	5.9112E-03	.1965	6.6607E-03	.2214
169	540	18.262	3.314	4.959E-03	.1648	6.0756E-03	.2019	6.8462E-03	.2276
170	550	9.614	1.736	2.559E-03	.0851	3.1252E-03	.1039	3.5136E-03	.1168
171	564	20.960	3.813	5.745E-03	.1909	7.0488E-03	.2343	7.9514E-03	.2643
172	560	18.805	3.310	4.959E-03	.1648	6.0763E-03	.2020	6.8480E-03	.2276
173	554	11.799	2.199	3.261E-03	.1084	3.9874E-03	.1325	4.4869E-03	.1491
175	549	7.755	1.549	2.312E-03	.0768	2.8223E-03	.0938	3.1727E-03	.1055
176	542	1.701	.324	4.732E-04	.0157	5.7648E-04	.0192	6.4708E-04	.0215
178	543	4.224	.760	1.109E-03	.0369	1.3513E-03	.0449	1.5169E-03	.0504
183	551	8.276	1.178	1.739E-03	.0578	2.1243E-03	.0706	2.3888E-03	.0794
184	551	9.035	1.632	2.410E-03	.0801	2.9432E-03	.0978	3.3096E-03	.1100
185	545	5.535	.997	1.459E-03	.0485	1.7784E-03	.0591	1.9972E-03	.0664
186	541	3.884	.698	1.016E-03	.0338	1.2366E-03	.0411	1.3876E-03	.0461
									UPPER WING SURFACE
									X/C Y/S
129	542	.744	.113	1.652E-04	.0055	2.0125E-04	.0067	2.2586E-04	.0075
130	540	.261	.044	6.411E-05	.0021	7.8047E-05	.0026	8.7563E-05	.0029
131	540	.139	.026	3.730E-05	.0012	4.5402E-05	.0015	5.0932E-05	.0017
132	538	.094	.018	2.586E-05	.0009	3.1454E-05	.0010	3.5289E-05	.0012
133	536	-.002	-.000	-4.948E-07	-.0000	-5.5293E-07	-.0000	-6.1980E-07	-.0000
143	542	1.114	.225	3.274E-04	.0109	3.9864E-04	.0133	4.4764E-04	.0149
145	540	.171	.029	4.199E-05	.0014	5.1119E-05	.0017	5.7350E-05	.0019
146	537	.164	.029	4.133E-05	.0014	5.0254E-05	.0017	5.6388E-05	.0019
158	542	1.337	.284	2.979E-04	.0099	3.6232E-04	.0120	4.0665E-04	.0135
159	542	.661	.108	1.574E-04	.0052	1.9147E-04	.0064	2.1911E-04	.0071
160	541	.366	.060	8.700E-05	.0029	1.0595E-04	.0035	1.1890E-04	.0040
161	538	.139	.024	3.505E-05	.0012	4.2665E-05	.0014	4.7826E-05	.0016
162	535	.314	.062	8.196E-05	.0021	7.5305E-05	.0025	8.4397E-05	.0028
179	541	1.663	.299	4.348E-04	.0145	5.2937E-04	.0176	5.9400E-04	.0197
180	539	.923	.166	2.407E-04	.0080	2.9200E-04	.0097	3.2855E-04	.0109
181	539	.499	.062	9.071E-05	.0030	1.1039E-04	.0037	1.2382E-04	.0041
182	536	.238	.040	5.710E-05	.0019	6.9407E-05	.0023	7.7792E-05	.0026
									VERTICAL STABILIZER
									X/C Z/S
187	534	2.517	.410	5.906E-04	.0196	7.1757E-04	.0239	8.0404E-04	.0267
188	531	.778	.135	1.931E-04	.0064	2.3442E-04	.0078	2.6246E-04	.0087
189	530	.111	.019	2.658E-05	.0009	3.2258E-05	.0011	3.6102E-05	.0012
191	530	.092	.018	2.509E-05	.0008	3.0458E-05	.0010	3.4088E-05	.0011
192	534	1.816	.345	4.967E-04	.0165	6.0339E-04	.0201	6.7604E-04	.0225
193	531	1.150	.199	2.862E-04	.0095	3.4741E-04	.0115	3.8903E-04	.0129
194	531	.208	.035	5.017E-05	.0017	6.0896E-05	.0020	6.8183E-05	.0023
195	530	.089	.016	2.274E-05	.0008	2.7663E-05	.0009	3.0904E-05	.0010
197	533	1.555	.287	4.120E-04	.0137	5.0040E-04	.0166	5.6049E-04	.0186
198	533	.469	.088	1.267E-04	.0042	1.5394E-04	.0051	1.7245E-04	.0057
200	531	.435	.078	1.115E-04	.0037	1.3529E-04	.0045	1.5146E-04	.0050
201	536	2.913	.553	7.994E-04	.0266	9.7169E-04	.0323	1.0891E-03	.0362
202	533	2.686	.395	4.391E-04	.0146	5.3329E-04	.0177	5.9740E-04	.0199
203	532	.598	.068	9.764E-05	.0032	1.1854E-04	.0039	1.3274E-04	.0044
204	531	.507	.060	8.673E-05	.0029	1.0529E-04	.0035	1.1789E-04	.0039

GROUP
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1052696

1052697

ARO(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
V11102

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
43	7	NAH-080	7.96	1650.0	1228	5.04	7.04	-2.00	0	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FR (IN .009FT)	STPN (IN .009FT)	SWITCH POSITION
90.3	.018	.745	3946	1.694E-05	7.667E-08	8.91E 05	3.009E-02	9.613E-02	1

TC NO	TW	DTWDT	G-DOT	M(TO)	M(TO)/MREF	M(.9TO)	M(.9TO)/MREF	M(.85TO)	M(.85TO)/MREF	FUSELAGE A/L	FUSELAGE Y/YMAX
1	571	95.407	17.414	2.669E-02	.8816	3.258BE-02	1.0843	3.6813E-02	1.2250	0	-0
2	547	35.342	9.799	8.907E-03	.2941	1.0377E-02	.3453	1.1699E-02	.3880	.0100	-0
3	543	14.542	2.307	3.367E-03	.1120	4.1022E-03	.1365	4.6051E-03	.1532	.0100	-.441
4	540	9.621	1.466	2.130F-03	.0709	2.5931E-03	.0863	2.9091E-03	.0968	.0100	-1.000
5	539	8.048	1.278	1.854F-03	.0617	2.2567E-03	.0751	2.5313E-03	.0842	.0100	0
6	542	18.249	3.091	4.506F-03	.1499	5.4885E-03	.1826	6.1604E-03	.2050	.0200	-0
7	543	14.477	2.604	3.800F-03	.1265	4.6297E-03	.1541	5.1972E-03	.1730	.0300	-0
8	541	11.116	1.938	2.820F-03	.0938	3.4336E-03	.1143	3.8530E-03	.1282	.0300	-.303
9	539	7.381	1.165	1.691E-03	.0563	2.0579E-03	.0685	2.3079E-03	.0768	.0300	-1.000
10	539	6.369	1.142	1.657E-03	.0551	2.0161E-03	.0671	2.2612E-03	.0752	.0300	0
11	542	11.385	2.234	3.256F-03	.1084	3.9644E-03	.1320	4.4520E-03	.1482	.0400	-0
12	540	6.593	1.292	1.878E-03	.0624	2.2827E-03	.0760	2.5606E-03	.0852	.0500	-0
13	540	6.686	1.310	1.901E-03	.0633	2.3140E-03	.0770	2.5957E-03	.0864	.0500	-.310
14	539	6.502	1.132	1.643E-03	.0547	1.9995E-03	.0665	2.2428E-03	.0746	.0500	-1.000
15	539	5.715	1.181	1.715E-03	.0571	2.0873E-03	.0695	2.3414E-03	.0779	.0500	0
16	540	4.741	.594	8.629E-04	.0287	1.0504E-03	.0350	1.1785E-03	.0392	.0800	-0
17	540	4.618	.745	1.083E-03	.0360	1.3185E-03	.0439	1.4792E-03	.0492	.0800	-.380
18	541	3.788	.639	9.298E-04	.0309	1.1320E-03	.0377	1.2702E-03	.0423	.0800	-1.000
19	540	2.318	.429	6.230E-04	.0207	7.5829E-04	.0252	8.5065E-04	.0283	.1000	-0
20	541	2.743	.209	3.043E-04	.0101	3.7054E-04	.0123	4.1574E-04	.0138	.1000	-.383
21	542	3.611	.350	5.094E-04	.0169	1.0467E-03	.0348	1.1746E-03	.0391	.1000	-.817
22	541	2.747	.503	7.311E-04	.0243	8.9017E-04	.0296	9.9881E-04	.0332	.1000	-1.000
23	541	1.982	.356	5.176F-04	.0172	6.3019E-04	.0210	7.0705E-04	.0235	.1000	.783
24	541	2.629	.501	7.292E-04	.0243	8.8748E-04	.0295	9.9640E-04	.0332	.1000	0
25	541	2.882	.548	8.440F-04	.0281	1.0275E-03	.0342	1.1528E-03	.0384	.1500	-.893
26	538	2.619	.513	7.423E-04	.0247	9.0294E-04	.0300	1.0128E-03	.0337	.1500	-1.000
27	538	2.031	.398	5.596F-04	.0186	6.8062E-04	.0226	7.6314E-04	.0254	.1500	.664
28	539	2.907	.439	6.655E-04	.0221	8.0941E-04	.0269	9.0834E-04	.0302	.1900	0
29	537	1.170	.210	3.035F-04	.0101	3.6902E-04	.0123	4.1372E-04	.0138	.2000	-0
30	537	1.578	.309	4.467E-04	.0149	5.4322E-04	.0181	6.0906E-04	.0203	.2000	-.278
31	538	2.260	.467	6.762F-04	.0225	8.2252E-04	.0274	9.2232E-04	.0307	.2000	-.686
32	538	2.718	.532	7.706E-04	.0256	9.3742E-04	.0312	1.0512E-03	.0350	.2000	-.792
33	538	3.130	.562	8.138F-04	.0271	9.9002E-04	.0329	1.1102E-03	.0369	.2000	-1.000
34	537	1.271	.242	3.490E-04	.0116	4.2512E-04	.0141	4.7660E-04	.0159	.2000	.888
35	538	3.167	.548	8.238F-04	.0274	1.0023E-03	.0334	1.1240E-03	.0374	.2000	0
36	540	7.865	1.289	1.865E-03	.0621	2.2703E-03	.0755	2.5468E-03	.0848	.2100	0
37	553	42.440	7.675	1.138E-02	.3781	1.3888E-02	.4622	1.5624E-02	.5199	.2200	0
38	547	27.368	4.336	6.364E-03	.2118	7.7830E-03	.2589	8.7228E-03	.2903	.2300	0
39	541	10.564	2.071	3.013F-03	.1003	3.6684E-03	.1221	4.1164E-03	.1370	.2400	.486
40	538	4.839	.763	1.106F-03	.0368	1.3455E-03	.0448	1.5090E-03	.0502	.2500	0
41	539	3.418	.648	9.478E-04	.0332	1.2141E-03	.0404	1.3617E-03	.0453	.2700	.485
42	538	2.901	.588	8.455E-04	.0281	1.0286E-03	.0342	1.1535E-03	.0384	.2700	.465
43	538	1.761	.268	3.884E-04	.0129	4.7254E-04	.0157	5.2991E-04	.0176	.2700	0
44	538	.756	.132	1.905E-04	.0063	2.3177E-04	.0077	2.5990E-04	.0086	.3000	-0
45	539	1.273	.235	3.413E-04	.0114	4.1527E-04	.0138	4.6575E-04	.0155	.3000	-.312
46	539	2.152	.469	6.450E-04	.0215	7.8484E-04	.0261	8.8024E-04	.0293	.3000	-.504
47	540	3.263	.484	7.035E-04	.0234	8.5644E-04	.0285	9.6087E-04	.0320	.3000	-.857
48	540	2.852	.481	6.990E-04	.0233	8.5083E-04	.0283	9.5448E-04	.0318	.3000	-1.000
49	538	1.678	.295	4.187F-04	.0139	5.0931E-04	.0169	5.7107E-04	.0190	.3000	.983
50	538	.926	.141	2.623E-04	.0087	3.1898E-04	.0106	3.5766E-04	.0119	.3000	.853
51	539	3.443	.722	1.048F-03	.0349	1.2759E-03	.0425	1.4312E-03	.0476	.3000	.433
52	538	1.441	.308	4.457E-04	.0148	5.4215E-04	.0180	6.0788E-04	.0202	.3000	.381
53	538	.906	.153	2.210F-04	.0074	2.6881E-04	.0089	3.0140E-04	.0100	.3000	0
54	538	.514	.101	1.458E-04	.0049	1.7741E-04	.0059	1.9895E-04	.0066	.4000	-0
55	538	1.153	.226	3.269E-04	.0109	3.9761E-04	.0132	4.4586E-04	.0148	.4000	-.321
56	539	2.358	.462	6.695F-04	.0223	8.1461E-04	.0271	9.1362E-04	.0304	.4000	-.526
57	541	5.872	1.023	1.488E-03	.0495	1.8112E-03	.0603	2.0322E-03	.0676	.4000	-.951
58	539	4.442	.798	1.158F-03	.0385	1.4090E-03	.0469	1.5805E-03	.0526	.4000	-1.000
59	539	2.574	.491	7.122E-04	.0237	8.6667E-04	.0288	9.7205E-04	.0323	.4000	1.000
60	539	2.351	.422	6.115E-04	.0203	7.4344E-04	.0248	8.3432E-04	.0278	.4000	.906
61	538	1.191	.208	2.992E-04	.0100	3.6393E-04	.0121	4.0810E-04	.0136	.4000	.750
62	538	.808	.096	1.385F-04	.0046	1.6845E-04	.0056	1.8890E-04	.0063	.4000	0
63	540	4.857	.872	1.267E-03	.0422	1.5426E-03	.0513	1.7306E-03	.0576	.4500	-1.000
64	539	2.168	.442	6.411E-04	.0213	7.7995E-04	.0260	8.7470E-04	.0291	.4500	1.000
65	539	2.290	.423	6.137E-04	.0204	7.4660E-04	.0248	8.3730E-04	.0279	.4500	.990
66	540	.525	.097	1.409E-04	.0047	1.7153E-04	.0057	1.9242E-04	.0064	.5000	-0
67	540	1.078	.205	2.981E-04	.0099	3.6283E-04	.0121	4.0700E-04	.0135	.5000	-.277
68	540	2.120	.415	6.034E-04	.0201	7.3451E-04	.0244	8.2402E-04	.0274	.5000	-.553
69	541	3.529	.694	1.013F-04	.0337	1.2334E-03	.0385	1.2999E-03	.0433	.5000	-.830
70	543	6.699	1.278	1.863E-03	.0620	2.2695E-03	.0755	2.5475E-03	.0848	.5000	-1.000
72	540	2.371	.478	6.940E-04	.0231	8.4484E-04	.0281	9.4784E-04	.0315	.5000	1.000
73	540	2.220	.411	5.962F-04	.0198	7.2561E-04	.0241	8.1395E-04	.0271	.5000	.886
74	540	1.561	.280	4.073E-04	.0136	4.9583E-04	.0165	5.5626E-04	.0185	.5000	.640
75	540	.935	.168	2.440F-04	.0081	2.9702E-04	.0099	3.3320E-04	.0111	.5000	0
76	542	.470	.077	1.119E-04	.0037	1.3622E-04	.0045	1.5288E-04	.0051	.5500	-0
77	540	1.612	.239	3.466E-04	.0115	4.2182E-04	.0140	4.7318E-04	.0157	.5500	-1.000
78	540	1.694	.258	3.750E-04	.0125	4.5634E-04	.0152	5.1198E-04	.0170	.5500	1.000
79	539	1.461	.220	3.918F-04	.0130	4.7668E-04	.0159	5.3482E-04	.0178	.5500	.935
80	539	.638	.083	1.211E-04	.0040	1.4733E-04	.0049	1.6528E-04	.0055	.6000	-0
81	540	.797	.165	2.393E-04	.0080	2.9124E-04	.0097	3.2671E-04	.0109	.6000	-.249
83	542	2.575	.505	7.353E-04	.0245	8.9554E-04	.0298	1.0050E-03	.0334	.6000	-.748
84	531	.326	.065	9.379F-05	.0031	1.1386E-04	.0038	1.2780E-04	.0042	.6000	-1.000
85	540	.859	.154	2.244E-04	.0075	2.7323E-04	.0091	3.0655E-04	.0102	.6000	1.000
86	540	.955	.149	2.754F-04	.0092	3.3523E-04	.0112	3.7609E-04	.0125	.6000	.907
87	541	1.727	.301	4.380E-04	.0146	5.3334E-04	.0177	5.9853E-04	.0199	.6000	0
88	541	.382	.069	9.981E-05	.0033	1.2152E-04	.0040	1.3636E-04	.0045	.6500	-0
89	540	.344	.064	9.253E-05	.0031	1.1263E-04	.0037	1.2635E-04	.0042	.7000	-0
90	540	.626	.125	1.812E-04	.0060	2.2052E-04	.0073	2.4740E-04	.0082	.7000	-.235
91	541	1.189	.233	3.389E-04	.0113	4.1263E-04	.0137	4.6297E-04	.0154	.7000	-.469
92	544	1.569	.296	4.329E-04	.0144	5.2752E-04	.0176	5.9226E-04	.0197	.7000	-.704
93	542	1.652	.333	4.855E-04	.0162	5.9136E-04	.0197	6.6373E-04	.0221	.7000	-.848
94	541	1.070	.233	3.392E-04	.0113	4.1309E-04	.0137	4.6355E-04	.0154	.7000	1.000
95	540	.793	.142	2.068E-04	.0069	2.5169E-04	.0084	2.8234E-04	.0094	.7000	.908
96	541	1.645	.296	4.299E-04	.0143	5.2336E-04	.0174	5.8724E-04	.0195	.7000	0
97	541	.418	.077	1.125E-04	.0037	1.3694E-04	.0046	1.5364E-04	.0051	.7500	-0
98	539	.406	.071	1.024E-04	.0034	1.2456E-04	.0041	1.3969E-04	.0046	.8000	-0

GROUP
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AEDC(ANO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREMEND	ROLL-MODEL	YAW
43	7	NAM-040	7.94	167.2	1232	5.13	7.13	-2.00	0	0

T-INF (DEG R)	P-INF (PSIA)	U-INF (FT/SEC)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FN (M= .009FT)	SIEH (M= .009FT)	SWITCH POSITION
90.5	.018M	4794.	3701.	1.0088E-05	7.2686E-08	8.47E 05	3.023E-02	0.190E-02	2

TC NO	TW	DTWLT	U-DOT	M(TO)	M(TO)/MREF	M(.9TO)	M(.9TO)/MREF	M(.85TO)	M(.85TO)/MREF	A/L	Y/YMAX
										FUSELAGE	
99	536	.477	.091	1.3046E-04	.0043	1.9841E-04	.0052	1.7751E-04	.0059	.8000	-.223
100	537	1.099	.208	2.994E-04	.0099	3.0388E-04	.0120	4.0780E-04	.0135	.8000	-.446
101	539	1.162	.232	3.349E-04	.0111	4.0742E-04	.0135	4.5685E-04	.0151	.8000	-.669
102	540	1.434	.297	4.298E-04	.0142	5.2294E-04	.0173	5.8691E-04	.0194	.8000	-.800
103	538	.339	.068	9.574E-05	.0032	1.1641E-04	.0039	1.3050E-04	.0043	.8500	-0
104	537	.308	.062	8.990E-05	.0030	1.0936E-04	.0036	1.2257E-04	.0041	.9000	-0
105	537	.457	.086	1.2478E-04	.0043	1.5541E-04	.0052	1.7530E-04	.0058	.9000	-.226
106	537	.617	.121	1.739E-04	.0058	2.1134E-04	.0070	2.3692E-04	.0078	.9000	-.452
107	538	.868	.159	2.240F-04	.0074	2.7234E-04	.0090	3.0535E-04	.0101	.9000	-.678
108	538	.812	.150	2.165F-04	.0072	2.6320E-04	.0087	2.9506E-04	.0098	.9000	-.817
109	539	.583	.113	1.635F-04	.0054	1.9841E-04	.0066	2.2240E-04	.0074	.9000	1.000
110	538	.715	.128	1.844E-04	.0061	2.2471E-04	.0074	2.5190E-04	.0083	.9000	.884
111	537	.186	.077	3.901E-05	.0013	4.7418E-05	.0016	5.3150E-05	.0018	.9000	.610
112	537	.199	.038	5.439F-05	.0018	6.6122E-05	.0022	7.4110E-05	.0025	.9500	-0
114	536	.423	.080	1.155E-04	.0038	1.4034E-04	.0046	1.5730E-04	.0052	.9900	-0
115	536	.558	.109	1.469E-04	.0052	1.7862E-04	.0061	2.1359E-04	.0071	.9900	-.253
116	536	.576	.113	1.620F-04	.0054	1.9683E-04	.0065	2.2055E-04	.0073	.9900	-.507
117	536	.612	.120	1.722E-04	.0057	2.0929E-04	.0069	2.3454E-04	.0078	.9900	-.660
118	537	.457	.082	1.140E-04	.0039	1.4341E-04	.0047	1.6074E-04	.0053	.9900	-.793
119	535	.363	.071	1.020F-04	.0034	1.2390E-04	.0041	1.3882E-04	.0046	.9900	.780
120	537	2.621	.508	4.405F-04	.0146	5.353HE-04	.0177	6.0003E-04	.0199	.9900	.305
										LOWER WING SURFACE A/C	Y/S
121	551	25.793	4.943	7.266E-03	.2404	8.8720E-03	.2935	9.9744E-03	.3300	0	.050
122	554	25.474	4.830	6.394E-03	.2115	7.8147E-03	.2585	8.7915E-03	.2909	0	.100
124	544	2.746	.494	7.194E-04	.0238	8.7647E-04	.0290	9.8306E-04	.0326	.2000	.100
126	538	.959	.168	2.431E-04	.0080	2.9557E-04	.0098	3.3138E-04	.0110	.6000	.100
127	537	.841	.151	2.173F-04	.0072	2.6423E-04	.0087	2.9617E-04	.0098	.7000	.100
128	535	.692	.094	1.349E-04	.0045	1.6390E-04	.0054	1.8363E-04	.0061	.9000	.100
134	553	31.662	6.428	9.459E-03	.3133	1.1568E-02	.3827	1.3011E-02	.4304	0	.150
135	550	24.012	4.338	6.362F-03	.2105	7.7643E-03	.2569	8.7278E-03	.2887	0	.250
136	544	6.468	1.163	1.693E-03	.0560	2.0622E-03	.0682	2.3150E-03	.0766	.1000	.250
137	544	4.032	.692	9.914E-04	.0328	1.2077E-03	.0400	1.3596E-03	.0448	.2000	.250
138	542	2.140	.396	5.754E-04	.0190	7.0060E-04	.0232	7.8814E-04	.0260	.4000	.250
140	541	1.232	.215	3.110F-04	.0103	3.7855E-04	.0125	4.2466E-04	.0140	.6000	.250
142	536	.665	.106	1.558F-04	.0052	1.8938E-04	.0063	2.1273E-04	.0070	.9000	.250
147	552	24.117	4.492	6.615F-03	.2189	8.0807E-03	.2673	9.0872E-03	.3006	0	.450
148	546	7.309	1.317	1.920E-03	.0635	2.3396E-03	.0774	2.6271E-03	.0869	.1000	.450
149	541	21.379	3.979	5.868F-03	.1934	7.1369E-03	.2361	8.0230E-03	.2654	0	.500
150	545	7.495	1.472	2.145F-03	.0710	2.6139E-03	.0865	2.9347E-03	.0971	.1000	.500
151	544	4.132	.811	1.179E-03	.0390	1.4363E-03	.0475	1.6121E-03	.0533	.2000	.500
152	544	2.662	.468	6.765F-04	.0224	8.2419E-04	.0273	9.2522E-04	.0306	.4000	.500
154	542	1.624	.292	4.233E-04	.0140	5.1534E-04	.0170	5.7818E-04	.0191	.6000	.500
156	540	1.018	.181	2.325E-04	.0077	2.8296E-04	.0094	3.1736E-04	.0105	.8000	.500
157	537	.928	.166	2.342E-04	.0078	2.9076E-04	.0096	3.2584E-04	.0108	.9000	.500
163	550	22.394	4.159	6.103E-03	.2019	7.4485E-03	.2464	8.3716E-03	.2770	0	.550
164	547	9.010	1.673	2.443E-03	.0808	2.9785E-03	.0985	3.3452E-03	.1107	.1000	.550
165	552	22.204	4.134	6.040E-03	.2011	7.4242E-03	.2456	8.3472E-03	.2762	0	.600
166	547	10.526	1.958	2.774F-03	.0918	3.3835E-03	.1119	3.8006E-03	.1257	.1000	.600
167	550	21.116	3.912	5.593E-03	.1850	6.8264E-03	.2258	7.6723E-03	.2538	0	.650
168	548	9.835	1.935	2.830F-03	.0936	3.4510E-03	.1142	3.8767E-03	.1283	.1000	.650
169	553	24.795	4.594	6.610F-03	.2187	8.0764E-03	.2672	9.0837E-03	.3005	0	.700
170	545	5.949	1.072	1.561F-03	.0517	1.9028E-03	.0630	2.1384E-03	.0707	.1000	.700
171	553	27.698	5.008	7.394F-03	.2443	9.0222E-03	.2985	1.0148E-02	.3357	0	.750
172	548	13.769	2.609	3.526E-03	.1166	4.3011E-03	.1423	4.8324E-03	.1599	.1000	.750
173	545	5.674	1.053	1.533E-03	.0507	1.8694E-03	.0618	2.0977E-03	.0694	.2000	.750
175	543	2.451	.494	7.143E-04	.0238	8.7479E-04	.0289	9.8176E-04	.0325	.4000	.750
176	541	.508	.097	1.401E-04	.0046	1.7050E-04	.0056	1.9123E-04	.0063	.7000	.750
178	539	1.043	.187	2.700E-04	.0089	3.2841E-04	.0109	3.6820E-04	.0122	.8000	.750
183	548	10.384	1.976	2.859E-03	.0716	2.6339E-03	.0871	2.9591E-03	.0979	0	.900
184	544	4.984	.947	1.306E-03	.0432	1.5908E-03	.0526	1.7857E-03	.0591	.2000	.900
185	540	2.186	.385	5.622E-04	.0186	6.8401E-04	.0226	7.6707E-04	.0254	.6000	.900
186	538	1.682	.302	4.349E-04	.0144	5.2881E-04	.0175	5.9279E-04	.0196	.8000	.900
										UPPER WING SURFACE A/C	Y/S
129	545	4.197	.841	9.346F-04	.0309	1.1390E-03	.0377	1.2788E-03	.0423	.1000	.100
130	543	1.784	.302	4.392F-04	.0145	5.3495E-04	.0177	6.0039E-04	.0199	.2000	.100
131	542	.433	.081	1.179E-04	.0039	1.4357E-04	.0047	1.6107E-04	.0053	.4000	.100
132	539	.204	.039	5.599E-05	.0019	6.8086E-05	.0023	7.6335E-05	.0025	.7000	.100
133	536	.229	.040	5.732E-05	.0019	6.9658E-05	.0023	7.8055E-05	.0026	.9000	.100
143	546	4.565	.922	1.344F-03	.0445	1.6384E-03	.0542	1.8397E-03	.0609	.1000	.250
145	543	1.820	.223	3.243E-04	.0107	3.9503E-04	.0131	4.4335E-04	.0147	.4000	.250
146	537	.334	.058	8.761E-05	.0028	1.0143E-04	.0034	1.1390E-04	.0038	.9000	.250
158	546	5.210	.796	1.161E-03	.0384	1.4155E-03	.0469	1.5895E-03	.0526	.1000	.500
159	546	3.929	.644	9.387E-04	.0311	1.1443E-03	.0379	1.2849E-03	.0425	.2000	.500
160	546	1.931	.316	4.617E-04	.0153	5.6286E-04	.0186	6.3213E-04	.0209	.4000	.500
161	539	.553	.098	1.392E-04	.0046	1.6919E-04	.0056	1.8995E-04	.0063	.8000	.500
162	536	.872	.118	1.704E-04	.0056	2.0704E-04	.0068	2.3201E-04	.0077	.9000	.500
179	549	13.214	2.344	3.441E-03	.1155	4.2548E-03	.1409	4.7851E-03	.1583	.1000	.750
180	546	5.049	.910	1.327E-03	.0439	1.6170E-03	.0535	1.8158E-03	.0601	.2000	.750
181	544	2.483	.362	5.268F-04	.0176	6.4131E-04	.0212	7.1991E-04	.0238	.4000	.750
182	538	1.536	.259	3.730E-04	.0123	4.5351E-04	.0150	5.0836E-04	.0168	.8000	.750
										VERTICAL STABILIZER A/C	Z/S
187	550	23.043	3.783	5.551E-03	.1836	6.7755E-03	.2242	7.6154E-03	.2519	0	.100
188	541	3.884	.677	9.798E-04	.0324	1.1924E-03	.0394	1.3375E-03	.0443	.1000	.100
189	539	.624	.109	1.519E-04	.0050	1.8468E-04	.0061	2.0706E-04	.0069	.4000	.100
191	538	.415	.079	1.139F-04	.0038	1.3847E-04	.0046	1.5524E-04	.0051	.8000	.100
192	549	25.819	4.942	7.240F-03	.2395	8.8342E-03	.2923	9.9269E-03	.3284	0	.250
193	543	7.665	1.337	1.943F-03	.0643	2.3663E-03	.0783	2.6557E-03	.0879	.1000	.250
194	541	1.058	.178	2.594E-04	.0085	3.1445E-04	.0104	3.5271E-04	.0117	.4000	.250
195	539	.550	.099	1.426E-04	.0047	1.7338E-04	.0057	1.9440E-04	.0064	.8000	.250
197	548	14.094	2.619	3.831E-03	.1267	4.6721E-03	.1546	5.2486E-03	.1736	.1000	.500
198	545	1.821	.328	4.776E-04	.0158	5.8194E-04	.0193	6.5334E-04	.0216	.4000	.500
200	540	.885	.159	2.299E-04	.0076	2.7978E-04	.0093	3.1379E-04	.0104	.8000	.500
201	547	33.137	6.368	9.438E-03	.3122	1.1545E-02	.3820	1.2996E-02	.4300	0	.750
202	548	16.895	1.935	2.830E-03	.0936	3.4520E-03	.1142	3.8781E-03	.1283	.1000	.750
203	544	2.024	.301	4.375E-04	.0145	5.3296E-04	.0176	5.9827E-04	.0198	.4000	.750
204	541	1.598	.187	2.702E-04	.0089	3.2886E-04	.0109	3.6889E-04	.0122	.8000	.750

GROUP
187

366018

366019

ARDC(AEDC,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VELIAZ

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
44	1	RAM-UNO	7.94	10442	1233	.02	2.02	-2.00	0	0

T-INF (DEG R)	M-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RREF-FM (IN .0001 FT)	SIER (IN .0001 FT)	SWITCH POSITION
90.6	.0184	.1704	3704	1.4995E-05	7.4966E-09	8.90E 05	3.0146-02	8.6136-02	1

TC NO	TW	D(M,L)	Q-UNIT	M(I0)	M(I0)/MREF	M(.9I0)	M(.9I0)/MREF	M(.8S10)	M(.8S10)/MREF	FUSELAGE A/L	FUSELAGE Y/YMAX
1	577	90.784	16.619	2.832E-02	.0001	3.113E-02	1.0345	3.526E-02	1.1698	0	0
2	549	29.963	6.918	7.195E-03	.2384	8.7656E-03	.2908	9.8485E-03	.3267	.0100	-0
3	546	11.066	1.752	2.448E-03	.0845	3.1047E-03	.1070	3.4856E-03	.1196	.0100	-.441
4	545	9.871	1.508	2.140E-03	.0727	2.6681E-03	.0885	2.9948E-03	.0994	.0100	-1.000
5	546	11.734	1.861	2.707E-03	.0898	3.2490E-03	.1094	3.7038E-03	.1229	.0100	0
6	547	15.344	2.599	3.784E-03	.1257	4.6184E-03	.1532	5.1874E-03	.1721	.0200	-0
7	546	10.662	1.915	2.784E-03	.0924	3.3424E-03	.1126	3.8090E-03	.1264	.0300	-0
8	544	7.756	1.353	1.965E-03	.0652	2.3932E-03	.0794	2.6861E-03	.0891	.0300	-.303
9	544	8.184	1.442	1.976E-03	.0922	2.4845E-03	.0748	2.8092E-03	.0851	.0300	-1.000
10	545	9.084	1.744	2.536E-03	.0841	3.0903E-03	.1025	3.4693E-03	.1151	.0300	0
11	545	8.143	1.599	2.323E-03	.0771	2.8299E-03	.0939	3.1764E-03	.1054	.0400	-0
12	544	4.477	.879	1.275E-03	.0423	1.5534E-03	.0515	1.7433E-03	.0578	.0500	-0
13	544	4.639	.911	1.321E-03	.0438	1.6091E-03	.0534	1.8058E-03	.0599	.0500	-.310
14	545	6.524	1.140	1.650E-03	.0549	2.0116E-03	.0669	2.2639E-03	.0751	.0500	-1.000
15	546	8.575	1.779	2.584E-03	.0859	3.1597E-03	.1047	3.5432E-03	.1175	.0500	0
16	544	2.738	.544	6.947E-04	.0185	8.0743E-04	.0202	8.8175E-04	.0226	.0800	-0
17	544	3.050	.518	7.448E-04	.0248	9.1218E-04	.0303	1.0238E-03	.0340	.0800	-.380
18	545	3.914	.662	9.629E-04	.0319	1.1726E-03	.0389	1.3163E-03	.0437	.0800	-1.000
19	542	1.414	.244	3.430E-04	.0117	4.2946E-04	.0143	4.8147E-04	.0160	.1000	-0
20	543	1.794	.317	1.944E-04	.0066	2.4215E-04	.0080	2.7170E-04	.0090	.1000	-.383
21	544	1.769	.293	4.245F-04	.0141	5.1705E-04	.0172	5.8027E-04	.0193	.1000	-.817
22	544	2.734	.493	7.147E-04	.0237	8.7035E-04	.0289	9.7670E-04	.0324	.1000	-1.000
23	544	2.754	.498	7.194E-04	.0239	8.7626E-04	.0291	9.8345E-04	.0326	.1000	.783
24	546	5.003	.956	1.390E-03	.0461	1.6934E-03	.0562	1.9017E-03	.0631	.1000	0
25	540	1.937	.390	5.628F-04	.0187	6.8462E-04	.0227	7.6770E-04	.0255	.1500	-.893
26	539	2.889	.565	8.122E-04	.0270	9.8876E-04	.0328	1.1084E-03	.0368	.1500	-1.000
27	541	3.491	.668	9.807F-04	.0319	1.1694E-03	.0388	1.3109E-03	.0435	.1500	.664
28	542	4.075	.940	1.389F-03	.0461	1.6913E-03	.0561	1.8974E-03	.0629	.1500	0
29	534	.666	.119	1.705F-04	.0057	2.0694E-04	.0069	2.3181E-04	.0077	.2000	-0
30	534	.855	.175	2.501F-04	.0083	3.0373E-04	.0101	3.4017E-04	.0113	.2000	-.278
31	535	1.261	.260	3.810F-04	.0126	4.6268E-04	.0153	5.1822E-04	.0172	.2000	-.466
32	536	2.662	.442	6.341E-04	.0210	7.7025E-04	.0256	8.6292E-04	.0286	.2000	-.792
33	537	2.965	.537	7.711E-04	.0256	9.3709E-04	.0311	1.0501E-03	.0348	.2000	-1.000
34	541	2.383	.456	6.501F-04	.0216	7.9099E-04	.0262	8.8708E-04	.0294	.2000	.888
35	543	4.966	.893	1.293E-03	.0429	1.5742E-03	.0522	1.7661E-03	.0586	.2000	0
36	546	17.017	2.787	4.054E-03	.1345	4.9400E-03	.1639	5.5462E-03	.1840	.2100	0
37	562	55.667	10.117	1.407F-02	.4999	1.6960E-02	.6124	2.0800E-02	.6900	.2200	0
38	563	30.582	4.861	7.151F-03	.2372	8.7354E-03	.2898	9.8239E-03	.3259	.2300	0
39	547	11.566	2.275	3.315F-03	.1100	4.0413E-03	.1341	4.5385E-03	.1506	.2400	.486
40	543	4.110	.650	9.411F-04	.0312	1.1457E-03	.0380	1.2855E-03	.0426	.2500	0
41	545	6.868	1.378	2.002F-03	.0664	2.4388E-03	.0809	2.7375E-03	.0908	.2700	.465
42	543	3.729	.752	1.090E-03	.0362	1.3272E-03	.0440	1.4892E-03	.0494	.2700	.465
43	541	.933	.142	2.057F-04	.0068	2.5032E-04	.0083	2.8078E-04	.0093	.2700	0
44	537	.560	.101	1.447F-04	.0048	1.7588E-04	.0058	1.9708E-04	.0065	.3000	-0
45	537	.859	.159	2.281E-04	.0076	2.7723E-04	.0092	3.1069E-04	.0103	.3000	-.312
46	538	1.135	.234	3.371F-04	.0112	4.0980E-04	.0136	4.5930E-04	.0152	.3000	-.504
47	540	1.983	.291	4.200E-04	.0139	5.1084E-04	.0169	5.7277E-04	.0190	.3000	-.857
48	539	2.014	.340	4.895E-04	.0162	5.9531E-04	.0197	6.6744E-04	.0221	.3000	-1.000
49	540	1.641	.331	4.779F-04	.0159	5.8134E-04	.0193	6.5189E-04	.0216	.3000	.983
50	542	2.232	.438	6.324E-04	.0210	7.6913E-04	.0255	8.6285E-04	.0287	.3000	.853
51	543	4.503	.933	1.341F-03	.0448	1.6465E-03	.0546	1.8451E-03	.0612	.3000	.433
52	541	1.468	.308	4.449F-04	.0148	5.4134E-04	.0180	6.0724E-04	.0201	.3000	.361
53	540	.410	.070	1.014F-04	.0034	1.2330E-04	.0041	1.3827E-04	.0046	.3000	0
54	538	.577	.113	1.625F-04	.0054	1.9749E-04	.0066	2.2135E-04	.0073	.4000	-0
55	537	.348	.068	9.793F-05	.0032	1.1902E-04	.0039	1.3338E-04	.0044	.4000	-.321
56	538	1.101	.215	3.094F-04	.0103	3.7671E-04	.0125	4.2224E-04	.0140	.4000	-.526
57	541	3.567	.621	8.975F-04	.0298	1.0920E-03	.0362	1.2247E-03	.0406	.4000	-.951
58	541	2.775	.498	7.194F-04	.0239	8.7547E-04	.0290	9.8180E-04	.0326	.4000	-1.000
59	540	1.736	.331	4.771E-04	.0158	5.8044E-04	.0193	6.5090E-04	.0216	.4000	1.000
60	540	2.364	.430	6.203E-04	.0206	7.5449E-04	.0250	8.4602E-04	.0281	.4000	.906
61	541	3.232	.581	8.385E-04	.0278	1.0202E-03	.0338	1.1441E-03	.0380	.4000	.750
62	539	1.073	.169	2.643F-04	.0081	2.9650E-04	.0098	3.3240E-04	.0110	.4000	0
63	542	3.002	.540	7.801E-04	.0259	9.4941E-04	.0315	1.0650E-03	.0353	.4500	-1.000
64	542	1.415	.285	4.124F-04	.0137	5.0193E-04	.0167	5.6303E-04	.0187	.4500	1.000
65	540	2.190	.406	5.862F-04	.0194	7.1307E-04	.0237	7.9959E-04	.0265	.4500	.990
66	538	.812	.150	2.160E-04	.0072	2.6263E-04	.0087	2.9464E-04	.0098	.5000	-0
67	538	.381	.072	1.042F-04	.0035	1.2667E-04	.0042	1.4194E-04	.0047	.5000	-.277
68	539	.845	.175	2.523E-04	.0084	3.0682E-04	.0102	3.4396E-04	.0114	.5000	-.953
69	541	2.325	.430	6.213F-04	.0206	7.5591E-04	.0251	8.4772E-04	.0281	.5000	-.830
70	543	4.250	.811	1.174F-03	.0389	1.4290E-03	.0474	1.6032E-03	.0532	.5000	-1.000
72	542	1.525	.307	4.447F-04	.0148	5.4125E-04	.0180	6.0718E-04	.0201	.5000	1.000
73	543	3.060	.715	1.036F-03	.0344	1.2610E-03	.0418	1.4148E-03	.0469	.5000	.886
74	541	2.284	.590	8.533F-04	.0283	1.0384E-03	.0344	1.1648E-03	.0386	.5000	.640
75	541	2.706	.486	7.021E-04	.0233	8.5420E-04	.0283	9.5799E-04	.0318	.5000	0
76	542	.974	.159	2.302E-04	.0076	2.8018E-04	.0093	3.1424E-04	.0104	.5500	-0
77	541	.771	.122	1.759E-04	.0058	2.1403E-04	.0071	2.4004E-04	.0080	.5500	-1.000
78	541	.992	.151	2.187E-04	.0073	2.6616E-04	.0088	2.9854E-04	.0099	.5500	1.000
79	541	2.165	.401	5.787E-04	.0192	7.0411E-04	.0234	7.8967E-04	.0262	.5500	.935
80	539	1.003	.191	2.750E-04	.0091	3.3462E-04	.0111	3.7492E-04	.0124	.6000	-0
81	539	.323	.067	9.617E-05	.0032	1.1696E-04	.0039	1.3113E-04	.0044	.6000	-.249
83	543	1.449	.294	4.262E-04	.0141	5.1897E-04	.0172	5.8233E-04	.0193	.6000	-.748
84	532	.134	.027	3.829F-05	.0013	4.6459E-05	.0015	5.2004E-05	.0017	.6000	-1.000
85	543	.453	.082	1.182F-04	.0039	1.4390E-04	.0048	1.6147E-04	.0054	.6000	1.000
86	541	1.567	.305	4.401F-04	.0146	5.3561E-04	.0178	6.0076E-04	.0199	.6000	.907
87	541	2.767	.482	6.965E-04	.0231	8.4744E-04	.0281	9.5046E-04	.0315	.6000	0
88	541	.938	.169	2.438F-04	.0081	2.9663E-04	.0098	3.3271E-04	.0110	.6500	-0
89	540	1.008	.186	2.689F-04	.0089	3.2704E-04	.0108	3.6671E-04	.0122	.7000	-0
90	539	.391	.077	1.104E-04	.0037	1.3430E-04	.0045	1.5057E-04	.0050	.7000	-.235
91	541	.600	.118	1.698F-04	.0056	2.0663E-04	.0069	2.3174E-04	.0077	.7000	-.469
92	545	.703	.130	1.895E-04	.0063	2.3082E-04	.0077	2.5911E-04	.0086	.7000	-.704
93	546	.850	.172	2.496E-04	.0083	3.0420E-04	.0101	3.4152E-04	.0113	.7000	-.848
94	547	1.384	.302	4.406E-04	.0146	5.3708E-04	.0179	6.0312E-04	.0200	.7000	1.000
95	540	.752	.135	1.946E-04	.0065	2.3675E-04	.0079	2.6545E-04	.0088	.7000	.908
96	541	2.477	.445	6.428E-04	.0213	7.8215E-04	.0259	8.7721E-04	.0291	.7000	0
97	541	1.034	.191	2.764E-04	.0092	3.3625E-04	.0112	3.7710E-04	.0125	.7500	-0
98	538	1.097	.191	2.747E-04	.0091	3.3395E-04	.0111	3.7433E-04	.0124	.8000	-0

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AEDC(ANU+INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREHEND	ROLL-MODEL	YAW
44	1	KAH-UHO	7.94	166.5	1237	.07	2.07	-2.00	0	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RHEF-FM (MM .0094FT)	SIFM (MM .0094FT)	SWITCH POSITION
90.9	.018	.290	3709	1.854E-05	7.316E-08	8.38E 05	3.019E-02	6.218E-02	2

TC NO	TW	DELCT	Q-HOT	H(TO)	H(TO)/HREF	H(S,910)	H(S,910)/HREF	H(S,A5TO)	H(S,A5TO)/HREF
									FUSELAGE
									A/L Y/YMAX
99	515	.174	.013	4.749E-05	.0016	5.765AE-04	.0019	6.6364E-05	.0021 .8000 -.223
100	515	.330	.064	9.106E-05	.0030	1.105AE-04	.0037	1.2340E-04	.0041 .8000 -.446
101	518	.592	.122	1.751E-04	.0058	2.127AE-04	.0070	2.3843E-04	.0079 .8000 -.669
102	519	.838	.144	2.062E-04	.0068	2.506AE-04	.0083	2.8092E-04	.0093 .8000 -.806
103	518	.908	.158	2.265E-04	.0075	2.752AE-04	.0091	3.0840E-04	.0102 .8500 -0
104	516	.442	.088	1.258E-04	.0042	1.527AE-04	.0051	1.7116E-04	.0057 .9000 -0
105	517	.248	.048	6.861E-05	.0023	8.333AE-05	.0028	9.3338E-05	.0031 .9000 -.226
106	516	.341	.067	9.543E-05	.0032	1.163AE-04	.0039	1.3037E-04	.0043 .9000 -.452
107	517	.351	.069	9.711E-05	.0031	1.184AE-04	.0039	1.3270E-04	.0044 .9000 -.678
108	518	.413	.077	1.107E-04	.0037	1.344AE-04	.0045	1.5065E-04	.0050 .9000 -.817
109	519	.430	.088	1.259E-04	.0042	1.529AE-04	.0051	1.7147E-04	.0057 .9000 1.000
110	518	1.018	.182	2.609E-04	.0086	3.170AE-04	.0105	3.5523E-04	.0118 .9000 .884
111	518	.404	.066	9.431E-05	.0031	1.145AE-04	.0038	1.2837E-04	.0043 .9000 .610
112	517	.607	.115	1.649E-04	.0055	2.003AE-04	.0066	2.2444E-04	.0074 .9500 -0
114	516	.725	.138	1.965E-04	.0065	2.385AE-04	.0079	2.6717E-04	.0089 .9900 -0
115	516	.502	.098	1.400E-04	.0046	1.700AE-04	.0056	1.9041E-04	.0063 .9900 -.253
116	516	.495	.097	1.390E-04	.0046	1.676AE-04	.0056	1.8770E-04	.0062 .9900 -.507
117	516	.369	.078	1.114E-04	.0037	1.353AE-04	.0045	1.5157E-04	.0050 .9900 -.660
118	517	.524	.094	1.342E-04	.0044	1.630AE-04	.0054	1.8262E-04	.0061 .9900 -.793
119	516	.744	.145	2.076E-04	.0069	2.521AE-04	.0084	2.8262E-04	.0094 .9900 .780
120	540	4.240	.445	8.486E-04	.0281	8.468AE-04	.0281	9.4937E-04	.0315 .9900 .305
									LOWER WING SURFACE
									A/C Y/S
121	550	22.634	4.335	6.113E-03	.2091	7.7000E-03	.2591	8.6501E-03	.2866 0 .050
122	552	22.484	3.885	5.674E-03	.1880	6.923AE-03	.2294	7.7813E-03	.2578 0 .100
124	543	1.643	.305	4.393E-04	.0146	5.496AE-04	.0177	5.9969E-04	.0199 .2000 .100
126	538	.547	.101	1.440E-04	.0048	1.749AE-04	.0058	1.9800E-04	.0065 .6000 .100
127	537	.462	.086	1.235E-04	.0041	1.500AE-04	.0050	1.6810E-04	.0056 .7000 .100
128	535	.381	.052	7.378E-05	.0024	8.957AE-05	.0030	1.0031E-04	.0033 .9000 .100
134	551	29.513	5.479	8.724E-03	.2890	1.064AE-02	.3526	1.1961E-02	.3963 0 .150
135	548	21.643	3.913	5.681E-03	.1882	6.923AE-03	.2294	7.7744E-03	.2576 0 .250
136	542	4.876	.871	1.242E-03	.0411	1.534AE-03	.0508	1.7211E-03	.0570 .1000 .250
137	541	2.709	.457	6.568E-04	.0218	7.988AE-04	.0265	8.9588E-04	.0297 .2000 .250
138	541	1.364	.252	3.628E-04	.0120	4.411AE-04	.0146	4.9462E-04	.0164 .4000 .250
140	541	1.039	.181	2.594E-04	.0086	3.155AE-04	.0105	3.5418E-04	.0117 .6000 .250
142	547	.441	.072	1.026E-04	.0034	1.248AE-04	.0041	1.3961E-04	.0046 .9000 .250
147	549	21.261	3.954	5.753E-03	.1906	7.015AE-03	.2324	7.8795E-03	.2610 0 .450
148	542	5.102	.918	1.322E-03	.0438	1.608AE-03	.0533	1.8045E-03	.0598 .1000 .450
149	548	20.580	3.825	5.568E-03	.1845	6.779AE-03	.2245	7.6084E-03	.2521 0 .500
150	542	6.127	1.201	1.730E-03	.0573	2.104AE-03	.0697	2.3602E-03	.0782 .1000 .500
151	542	2.848	.559	8.045E-04	.0267	9.788AE-04	.0324	1.0977E-03	.0364 .2000 .500
152	544	1.812	.316	4.588E-04	.0151	5.581AE-04	.0184	6.2396E-04	.0207 .4000 .500
154	542	1.168	.214	3.076E-04	.0102	3.742AE-04	.0124	4.1968E-04	.0139 .6000 .500
156	541	.850	.135	1.942E-04	.0064	2.362AE-04	.0078	2.6498E-04	.0088 .8000 .500
157	538	.621	.111	1.593E-04	.0053	1.936AE-04	.0064	2.1687E-04	.0072 .9000 .500
163	548	19.199	3.567	5.176E-03	.1715	6.298AE-03	.2090	7.0831E-03	.2347 0 .550
164	544	7.337	1.361	1.965E-03	.0651	2.392AE-03	.0793	2.6845E-03	.0889 .1000 .550
165	550	21.390	3.975	5.793E-03	.1919	7.046AE-03	.2341	7.9368E-03	.2629 0 .600
166	546	8.440	1.520	2.200E-03	.0729	2.679AE-03	.0888	3.0070E-03	.0996 .1000 .600
167	548	20.160	3.638	5.284E-03	.1751	6.441AE-03	.2134	7.2335E-03	.2396 0 .650
168	546	8.230	1.618	2.342E-03	.0776	2.852AE-03	.0945	3.2015E-03	.1061 .1000 .650
169	542	24.867	4.460	6.517E-03	.2159	7.954AE-03	.2635	8.9411E-03	.2962 0 .700
170	544	9.463	.976	1.409E-03	.0467	1.715AE-03	.0568	1.9250E-03	.0638 .1000 .700
171	553	27.007	4.884	7.141E-03	.2366	8.718AE-03	.2888	9.7997E-03	.3247 0 .750
172	547	12.120	2.119	3.073E-03	.1018	3.745AE-03	.1241	4.2046E-03	.1393 .1000 .750
173	545	9.020	.937	1.355E-03	.0449	1.650AE-03	.0547	1.8521E-03	.0614 .2000 .750
175	544	1.755	.354	5.112E-04	.0169	6.222AE-04	.0206	6.9808E-04	.0231 .4000 .750
176	542	.331	.063	9.049E-05	.0030	1.105AE-04	.0037	1.2397E-04	.0041 .7000 .750
178	539	.839	.151	2.158E-04	.0072	2.623AE-04	.0087	2.9409E-04	.0097 .8000 .750
183	549	10.240	1.456	2.118E-03	.0702	2.582AE-03	.0856	2.9006E-03	.0961 0 .900
184	545	3.984	.719	1.039E-03	.0344	1.265AE-03	.0419	1.4201E-03	.0470 .2000 .900
185	541	1.398	.251	3.599E-04	.0119	4.377AE-04	.0145	4.9071E-04	.0163 .6000 .900
186	538	1.370	.246	3.517E-04	.0117	4.273AE-04	.0142	4.7888E-04	.0159 .8000 .900
									UPPER WING SURFACE
									A/C Y/S
129	546	5.644	.863	1.249E-03	.0414	1.521AE-03	.0504	1.7075E-03	.0566 .1000 .100
130	544	2.640	.446	6.440E-04	.0213	7.838AE-04	.0260	8.792AE-04	.0291 .2000 .100
131	542	.909	.168	2.423E-04	.0080	2.947AE-04	.0098	3.3056E-04	.0110 .4000 .100
132	539	.505	.096	1.378E-04	.0046	1.676AE-04	.0055	1.8775E-04	.0062 .7000 .100
133	537	.388	.068	9.641E-05	.0032	1.170AE-04	.0039	1.3116E-04	.0043 .9000 .100
143	545	6.274	1.267	1.831E-03	.0607	2.230AE-03	.0739	2.5026E-03	.0829 .1000 .250
145	544	2.085	.356	5.048E-04	.0169	6.141AE-04	.0205	6.8857E-04	.0230 .4000 .250
146	538	.860	.115	1.665E-04	.0056	1.994AE-04	.0066	2.2391E-04	.0074 .9000 .250
158	545	8.369	.973	1.405E-03	.0466	1.711AE-03	.0567	1.9202E-03	.0636 .1000 .500
159	545	3.921	.662	9.279E-04	.0307	1.130AE-03	.0374	1.2680E-03	.0420 .2000 .500
160	546	2.219	.363	5.264E-04	.0174	6.412AE-04	.0212	7.1948E-04	.0238 .4000 .500
161	541	.765	.133	1.911E-04	.0064	2.331AE-04	.0077	2.6139E-04	.0087 .8000 .500
162	537	1.094	.189	2.725E-04	.0090	2.581AE-04	.0086	2.8927E-04	.0096 .9000 .500
179	549	16.013	2.490	4.205E-03	.1393	5.124IE-03	.1699	5.7600E-03	.1908 .1000 .750
180	547	6.451	1.183	1.688E-03	.0558	2.056IE-03	.0680	2.3059E-03	.0764 .2000 .750
181	546	4.471	.562	6.134E-04	.0203	9.9090E-04	.0328	1.1123E-03	.0368 .4000 .750
182	539	2.365	.399	5.720E-04	.0190	6.953GE-04	.0230	7.7938E-04	.0258 .8000 .750
									VERTICAL STABILIZER
									A/C Z/S
187	559	47.644	7.859	1.160E-02	.3844	1.419SE-02	.4703	1.5979E-02	.5294 0 .100
188	545	6.967	1.216	1.757E-03	.0582	2.139SE-03	.0709	2.4007E-03	.0795 .1000 .100
189	542	1.496	.253	3.638E-04	.0121	4.425SE-04	.0147	4.9635E-04	.0164 .4000 .100
191	542	.610	.116	1.675E-04	.0055	2.037GE-04	.0067	2.2842E-04	.0076 .8000 .100
192	556	35.075	6.738	9.899E-03	.3279	1.209TE-02	.4007	1.3607E-02	.4508 0 .250
193	547	9.609	1.640	2.435E-03	.0807	2.966SE-03	.0983	3.3301E-03	.1103 .1000 .250
194	545	2.061	.345	5.041E-04	.0167	6.139IE-04	.0203	6.8893E-04	.0228 .4000 .250
195	543	1.069	.192	2.771E-04	.0092	3.372JE-04	.0112	3.7826E-04	.0125 .8000 .250
197	550	16.279	3.029	4.415E-03	.1462	5.385OE-03	.1784	6.0501E-03	.2004 .1000 .500
198	549	2.132	.385	5.591E-04	.0185	6.816AE-04	.0226	7.6552E-04	.0254 .4000 .500
200	543	1.056	.190	2.740E-04	.0091	3.335JE-04	.0110	3.7414E-04	.0124 .8000 .500
201	564	47.272	9.117	1.354F-02	.4487	1.659ZE-02	.5497	1.8695E-02	.6194 0 .750
202	552	23.249	2.680	3.915F-03	.1297	4.778AE-03	.1583	5.3704E-03	.1779 .1000 .750
203	547	3.174	.364	5.282E-04	.0175	6.437OE-04	.0213	7.2268E-04	.0239 .4000 .750
204	543	2.139	.257	3.698E-04	.0122	4.497BE-04	.0149	5.0448E-04	.0167 .8000 .750

GROUP
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366026

366027

ARO(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREHEND	ROLL-MODEL	YAW
45	7	KARMAN	7.94	1650	1739	-4.00	-2.00	-2.00	0	0

T-INF (DEG R)	P-INF (PSIA)	U-INF (FT/SEC)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RREF-FTR (IN = .009FT)	SIER (IN = .009FT)	SWITCH POSITION
91.0	.01P	.0P7	3712	1.044E-05	7.324E-08	8.33E 05	3.013E-02	6.23HE-02	1

TC NO	TM	DTHET	Q-INF	MI(0)	MI(0)/MREF	MI.9(0)	MI.9(0)/MREF	MI.85(0)	MI.85(0)/MREF	FUSELAGE X/L	FUSELAGE Y/YMAX	
1	545	44.431	17.187	2.552E-02	.0468	3.126HE-02	1.0377	3.523HE-02	1.1695	0	0	
2	540	25.265	4.124	5.497E-03	.1957	7.166HE-03	.2378	8.031DE-03	.2665	.0100	-0	
3	535	8.444	1.429	1.HH9E-03	.0827	2.69Y2E-03	.0761	2.566HE-03	.0852	.0100	-.441	
4	536	10.857	1.857	2.356E-03	.0782	2.8H00E-03	.0949	3.202HE-03	.1063	.0100	-1.000	
5	537	15.994	2.523	3.604E-03	.1196	4.3791E-03	.1454	4.906HE-03	.1628	.0100	0	
6	536	12.454	2.004	2.938E-03	.0975	3.566HE-03	.1184	3.994HE-03	.1326	.0200	-0	
7	535	7.912	1.417	2.012E-03	.0668	2.441DE-03	.0810	2.732EE-03	.0907	.0300	-0	
8	534	5.561	.955	1.355E-03	.0450	1.643YE-03	.0545	1.840ZE-03	.0611	.0300	-.303	
9	536	8.647	1.462	1.936E-03	.0643	2.350BE-03	.0780	2.631HE-03	.0873	.0300	-1.000	
10	538	13.554	2.439	3.4H0E-03	.1155	4.226HE-03	.1403	4.735DE-03	.1571	.0300	0	
11	535	4.802	.938	1.312E-03	.0442	1.614HE-03	.0537	1.810IE-03	.0601	.0400	-0	
12	534	2.771	.541	7.671E-04	.0255	9.3051E-04	.0309	1.041SE-03	.0346	.0500	-0	
13	534	3.227	.629	8.919E-04	.0296	1.08H2E-03	.0359	1.211DE-03	.0402	.0500	-.310	
14	536	6.933	1.205	1.713E-03	.0568	2.079ZE-03	.0690	2.326ZE-03	.0773	.0500	-1.000	
15	539	12.409	2.564	3.6H2E-03	.1215	4.449ZE-03	.1477	4.984YE-03	.1654	.0500	0	
16	533	1.93H	.194	2.719E-04	.0090	3.297HE-04	.0109	3.690HE-04	.0122	.0800	-0	
17	534	2.280	.383	5.441E-04	.0181	6.602IE-04	.0219	7.390JE-04	.0245	.0800	-.300	
18	535	4.477	.753	1.070E-03	.0355	1.299IE-03	.0431	1.454SE-03	.0483	.0800	-1.000	
19	533	.545	.100	1.422E-04	.0047	1.724HE-04	.0057	1.929IE-04	.0064	.1000	-0	
20	534	1.060	.077	1.098E-04	.0036	1.332SE-04	.0044	1.491HE-04	.0049	.1000	-.383	
21	534	1.331	.217	3.075E-04	.0102	3.730IE-04	.0124	4.176ZE-04	.0139	.1000	-.817	
22	536	3.069	.497	9.350E-04	.0310	1.134YE-03	.0377	1.270HE-03	.0422	.1000	-1.000	
23	537	3.902	.700	9.478E-04	.0331	1.211HE-03	.0402	1.357IE-03	.0450	.1000	.783	
24	540	7.773	1.440	2.117E-03	.0703	2.567BE-03	.0854	2.876ZE-03	.0957	.1000	0	
25	533	1.484	.298	4.216E-04	.0140	5.113IE-04	.0170	5.727IE-04	.0190	.1500	-.893	
26	532	2.043	.555	7.442E-04	.0260	9.50HBE-04	.0316	1.063HE-03	.0353	.1500	-1.000	
27	535	5.167	.974	1.383E-03	.0459	1.67H9E-03	.0557	1.87H6E-03	.0624	.1500	.884	
28	538	8.870	1.598	1.994E-03	.0662	2.422IE-03	.0804	2.713ZE-03	.0900	.1500	0	
29	529	.634	.114	1.606E-04	.0053	1.945BE-04	.0065	2.175BE-04	.0072	.2000	-0	
30	529	.848	.128	1.778E-04	.0059	2.150YE-04	.0071	2.405DE-04	.0080	.2000	-.278	
31	529	.858	.178	2.474E-04	.0082	2.997AE-04	.0099	3.351TE-04	.0111	.2000	-.466	
32	530	1.534	.300	4.225E-04	.0140	5.114QE-04	.0170	5.721QE-04	.0190	.2000	-.742	
33	532	2.950	.527	7.457E-04	.0247	9.041DE-04	.0300	1.011SE-03	.0336	.2000	-1.000	
34	536	3.616	.647	9.774E-04	.0324	1.184AE-03	.0394	1.325ZE-03	.0441	.2000	.888	
35	538	5.484	1.163	1.659E-03	.0551	2.011AE-03	.0669	2.257TE-03	.0749	.2000	0	
36	544	28.107	4.499	6.620E-03	.2197	8.056ZE-03	.2674	9.036HE-03	.2999	.2100	0	
37	544	69.035	12.558	1.860E-02	.6173	2.274QE-02	.7548	2.550AE-02	.8518	.2200	0	
38	548	34.263	5.431	7.861E-03	.2609	9.579ZE-03	.3179	1.075JE-02	.3569	.2300	0	
39	541	12.273	2.408	3.450E-03	.1145	4.194YE-03	.1392	4.702AE-03	.1561	.2400	.486	
40	537	2.017	.318	4.527E-04	.0150	5.497QE-04	.0182	6.156TE-04	.0204	.2500	0	
41	539	7.775	1.565	2.238E-03	.0743	2.719AE-03	.0903	3.047AE-03	.1011	.2700	.465	
42	537	3.661	.736	1.049E-03	.0348	1.274IE-03	.0423	1.427IE-03	.0474	.2700	.465	
43	536	.565	.089	1.266E-04	.0042	1.536BE-04	.0051	1.720SE-04	.0057	.2700	0	366030**
44	533	.959	.165	2.343E-04	.0078	2.841AE-04	.0094	3.179QE-04	.0106	.3000	-0	
45	532	.269	.045	6.491E-05	.0023	8.355SE-05	.0028	9.368TE-05	.0031	.3000	-.312	
46	533	.374	.078	1.103E-04	.0037	1.337BE-04	.0044	1.497QE-04	.0050	.3000	-.504	
47	534	1.145	.168	2.380E-04	.0079	2.88A5E-04	.0096	3.233SE-04	.0107	.3000	-.857	
48	535	1.769	.301	4.277E-04	.0142	5.191ZE-04	.0172	5.812IE-04	.0193	.3000	-1.000	
49	537	2.506	.490	6.979E-04	.0232	8.473QE-04	.0281	9.490SE-04	.0315	.3000	.983	
50	539	4.120	.807	1.152E-03	.0382	1.399JE-03	.0464	1.567HE-03	.0520	.3000	.853	
51	539	4.282	.885	1.264E-03	.0419	1.535AE-03	.0510	1.720JE-03	.0571	.3000	.433	
52	537	1.445	.298	4.248E-04	.0141	5.159AE-04	.0171	5.778UE-04	.0192	.3000	.381	
53	537	.643	.108	1.542E-04	.0051	1.871QE-04	.0062	2.096AE-04	.0070	.3000	0	
54	534	1.249	.254	3.597E-04	.0119	4.366JE-04	.0145	4.885OE-04	.0162	.4000	-0	
55	533	.354	.070	9.903E-05	.0033	1.201OE-04	.0040	1.343QE-04	.0045	.4000	-.321	
56	533	.353	.069	9.753E-05	.0032	1.182EE-04	.0039	1.323SE-04	.0044	.4000	-.526	
57	535	1.762	.303	4.300E-04	.0143	5.213AE-04	.0173	5.833IE-04	.0194	.4000	-.951	
58	535	2.133	.382	5.432E-04	.0180	6.593AE-04	.0219	7.382JE-04	.0245	.4000	-1.000	
59	536	2.943	.559	7.956E-04	.0264	9.65H2E-04	.0321	1.081SE-03	.0359	.4000	1.000	
60	541	9.824	1.765	2.530E-03	.0840	3.076QE-03	.1021	3.444PE-03	.1144	.4000	.906	
61	540	5.645	1.014	1.450E-03	.0481	1.762IE-03	.0585	1.974IE-03	.0655	.4000	.750	
62	539	2.364	.373	5.329E-04	.0177	6.476QE-04	.0215	7.254JE-04	.0241	.4000	0	
63	536	2.805	.503	7.151E-04	.0237	8.690IE-04	.0288	9.719HE-04	.0323	.4500	-1.000	
64	538	4.146	.834	1.189E-03	.0395	1.444JE-03	.0479	1.617QE-03	.0537	.4500	1.000	
65	540	6.314	1.168	1.672E-03	.0555	2.031HE-03	.0674	2.277IE-03	.0756	.4500	.990	
66	536	1.494	.276	3.924E-04	.0130	4.766IE-04	.0158	5.334YE-04	.0177	.5000	-0	
67	535	.644	.123	1.752E-04	.0058	2.127QE-04	.0071	2.379AE-04	.0079	.5000	-.277	
68	535	.360	.070	9.983E-05	.0033	1.211SE-04	.0040	1.356JE-04	.0045	.5000	-.553	
69	536	.931	.172	2.443E-04	.0081	2.965IE-04	.0098	3.320IE-04	.0110	.5000	-.830	
70	538	1.934	.369	5.260E-04	.0175	6.384TE-04	.0212	7.196HE-04	.0238	.5000	-1.000	
71	539	3.912	.747	1.124E-03	.0373	1.365YE-03	.0453	1.530AE-03	.0508	.5000	1.000	
72	541	4.274	.792	1.134E-03	.0376	1.377BE-03	.0457	1.544BE-03	.0513	.5000	.886	
73	541	4.481	.802	1.149E-03	.0381	1.397IE-03	.0464	1.566ZE-03	.0520	.5000	.640	
74	541	4.183	.752	1.078E-03	.0358	1.310ZE-03	.0435	1.480BE-03	.0487	.5000	0	
75	540	1.602	.282	3.743E-04	.0124	4.548BE-04	.0151	5.097HE-04	.0169	.5500	-0	
76	539	2.282	.360	5.141E-04	.0171	6.246IE-04	.0207	6.998SE-04	.0232	.5500	-1.000	
77	540	1.981	.302	4.319E-04	.0143	5.246QE-04	.0174	5.877ZE-04	.0195	.5500	1.000	
78	539	2.571	.476	6.798E-04	.0226	8.261QE-04	.0274	9.257JE-04	.0307	.5500	.935	
79	538	1.474	.281	4.004E-04	.0133	4.866QE-04	.0161	5.450QE-04	.0181	.6000	-0	
80	538	.523	.108	1.543E-04	.0051	1.874IE-04	.0062	2.099YE-04	.0070	.6000	-.249	
81	539	.447	.088	1.252E-04	.0042	1.521ZE-04	.0050	1.704TE-04	.0057	.6000	-.748	
82	532	.714	.143	2.024E-04	.0067	2.459IE-04	.0081	2.745YE-04	.0091	.6000	-1.000	
83	541	.917	.168	2.361E-04	.0078	2.869TE-04	.0095	3.216TE-04	.0107	.6000	1.000	
84	541	1.731	.330	4.725E-04	.0157	5.744QE-04	.0191	6.439ZE-04	.0214	.6000	.907	
85	541	3.216	.960	8.031E-04	.0267	9.769IE-04	.0324	1.094TE-03	.0363	.6000	0	
86	541	1.546	.278	3.978E-04	.0132	4.835SE-04	.0160	5.420QE-04	.0180	.6500	-0	
87	540	1.444	.261	3.821E-04	.0127	4.644SE-04	.0154	5.205OE-04	.0173	.7000	-0	
88	539	.615	.120	1.720E-04	.0057	2.090AE-04	.0069	2.342JE-04	.0078	.7000	-.235	
89	540	.315	.062	8.838E-05	.0029	1.074IE-04	.0036	1.203TE-04	.0040	.7000	-.469	
90	543	.274	.051	7.245E-05	.0024	8.8822E-05	.0029	9.938AE-05	.0033	.7000	-.704	
91	543	.400	.081	1.157E-04	.0038	1.407BE-04	.0047	1.578SE-04	.0052	.7000	-.848	
92	545	1.590	.347	5.004E-04	.0166	6.091IE-04	.0202	6.834OE-04	.0227	.7000	1.000	
93	540	1.013	.182	2.602E-04	.0086	3.162BE-04	.0105	3.544BE-04	.0118	.7000	.908	
94	541	2.591	.466	6.670E-04	.0221	8.109BE-04	.0269	9.090EE-04	.0302	.7000	0	
95	541	1.165	.216	3.090E-04	.0103	3.756IE-04	.0125	4.211OE-04	.0140	.7500	-0	
96	539	1.722	.300	4.280E-04	.0142	5.200AE-04	.0173	5.826YE-04	.0193	.8000	-0	

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ARO,(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V11162

RUN	CONFIG	MODEL	MACH NO	PO-PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREMEND	ROLL-MODEL	YAW
45	7	KAH-UNO	7.94	105.1	1241	-4.90	-2.90	-2.00	0	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RREF-FM (IN = .009FT)	SIRM (IN = .009FT)	SWITCH POSITION
91.2	.018	.274	3716	1.0346E-05	7.3456E-08	8.266E 05	3.009E-02	6.259E-02	2

TC NO	TW	DT=0.1	Q-DOT	HC(TO)	HC(TO)/HREF	HC(9TO)	HC(9TO)/HREF	HC(HSTO)	HC(HSTO)/HREF
									FUSELAGE
									A/L Y/YMAX
99	535	.575	.106	1.545E-04	.0051	1.874E-04	.0062	2.09E-04	.0070	.8000 -.223
100	536	.163	.035	4.902E-05	.0016	5.944E-05	.0020	6.652E-05	.0022	.8000 -.446
101	537	.271	.056	7.990E-05	.0027	9.69E-05	.0032	1.08E-04	.0036	.8000 -.669
102	537	.349	.072	1.027E-04	.0034	1.240E-04	.0041	1.38E-04	.0046	.8000 -.806
103	538	1.109	.229	3.253E-04	.0108	3.945E-04	.0131	4.42E-04	.0147	.8500 -0
104	536	1.254	.259	3.678E-04	.0106	4.464E-04	.0129	4.99E-04	.0144	.9000 -0
105	536	.634	.124	1.758E-04	.0058	2.113E-04	.0071	2.38E-04	.0079	.9000 -.226
106	536	.193	.038	5.357E-05	.0018	6.501E-05	.0022	7.27E-05	.0024	.9000 -.452
107	537	.209	.041	5.328E-05	.0018	6.457E-05	.0022	7.24E-05	.0024	.9000 -.678
108	537	.237	.044	6.207E-05	.0021	7.528E-05	.0025	8.42E-05	.0028	.9000 -.817
109	539	.377	.078	1.079E-04	.0036	1.310E-04	.0044	1.46E-04	.0049	.9000 1.000
110	539	2.058	.377	5.361E-04	.0179	6.511E-04	.0216	7.29E-04	.0243	.9000 .884
111	538	.704	.119	1.613E-04	.0054	1.957E-04	.0065	2.22E-04	.0074	.9000 .610
112	537	1.027	.196	2.740E-04	.0092	3.325E-04	.0112	3.78E-04	.0126	.9500 -0
114	536	1.015	.193	2.715E-04	.0091	3.294E-04	.0110	3.75E-04	.0124	.9900 -0
115	536	.741	.145	2.052E-04	.0068	2.489E-04	.0083	2.78E-04	.0093	.9900 -.253
116	537	1.071	.209	2.972E-04	.0099	3.607E-04	.0120	4.03E-04	.0134	.9900 -.507
117	537	1.605	.314	4.459E-04	.0148	5.413E-04	.0180	6.06E-04	.0202	.9900 -.660
118	539	1.764	.317	4.506E-04	.0150	5.472E-04	.0182	6.13E-04	.0204	.9900 -.793
119	537	1.976	.347	5.049E-04	.0168	6.069E-04	.0222	7.46E-04	.0248	.9900 .780
120	541	6.261	.716	1.023E-03	.0340	1.243E-03	.0414	1.39E-03	.0463	.9900 .305
									LOWER WING SURFACE
									A/C Y/S
121	547	19.494	3.727	5.363E-03	.1783	6.529E-03	.2171	7.32E-03	.2436	0 .050
122	549	19.611	3.324	4.748E-03	.1595	5.844E-03	.1943	6.56E-03	.2181	0 .100
124	540	.912	.164	2.336E-04	.0078	2.849E-04	.0094	3.16E-04	.0106	.2000 .100
126	536	.350	.059	8.368E-05	.0028	1.015E-04	.0034	1.13E-04	.0038	.6000 .100
127	536	.302	.054	7.665E-05	.0025	9.302E-05	.0031	1.04E-04	.0035	.7000 .100
128	536	.114	.015	2.198E-05	.0007	2.651E-05	.0009	2.96E-05	.0010	.9000 .100
134	549	26.456	5.440	6.437E-03	.2805	1.024E-02	.3418	1.15E-02	.3838	0 .150
135	546	20.159	3.635	5.229E-03	.1738	6.342E-03	.2116	7.13E-03	.2374	0 .250
136	540	1.676	.660	9.404E-04	.0313	1.142E-03	.0380	1.28E-03	.0426	.1000 .250
137	539	1.705	.287	4.089E-04	.0136	4.966E-04	.0165	5.58E-04	.0185	.2000 .250
138	539	.729	.135	1.918E-04	.0064	2.329E-04	.0077	2.62E-04	.0087	.4000 .250
140	539	.649	.113	1.610E-04	.0054	1.955E-04	.0065	2.19E-04	.0073	.6000 .250
142	537	.264	.043	6.098E-05	.0020	7.399E-05	.0025	8.28E-05	.0028	.9000 .250
147	549	24.444	4.545	6.560E-03	.2181	7.992E-03	.2657	8.97E-03	.2983	0 .450
148	540	4.557	.918	1.186E-03	.0388	1.417E-03	.0471	1.58E-03	.0528	.1000 .450
149	547	23.080	4.298	6.178E-03	.2054	7.526E-03	.2502	8.44E-03	.2807	0 .500
150	541	4.555	.893	1.274E-03	.0423	1.554E-03	.0515	1.73E-03	.0577	.1000 .500
151	540	1.815	.356	5.084E-04	.0169	6.194E-04	.0205	6.90E-04	.0229	.2000 .500
152	543	1.434	.250	3.585E-04	.0119	4.368E-04	.0145	4.88E-04	.0163	.4000 .500
154	542	1.053	.199	2.708E-04	.0090	3.299E-04	.0109	3.69E-04	.0123	.6000 .500
156	541	.632	.100	1.426E-04	.0047	1.737E-04	.0058	1.94E-04	.0065	.8000 .500
157	538	.453	.081	1.156E-04	.0038	1.408E-04	.0047	1.58E-04	.0052	.9000 .500
163	546	14.795	2.747	3.963E-03	.1314	4.812E-03	.1600	5.39E-03	.1795	0 .550
164	542	6.331	1.173	1.677E-03	.0557	2.043E-03	.0678	2.28E-03	.0760	.1000 .550
165	549	21.260	3.953	5.710E-03	.1894	6.957E-03	.2313	7.81E-03	.2597	0 .600
166	544	6.140	1.105	1.583E-03	.0526	1.928E-03	.0640	2.15E-03	.0718	.1000 .600
167	548	15.767	2.937	4.091E-03	.1360	4.984E-03	.1657	5.59E-03	.1859	0 .650
169	545	5.927	1.104	1.672E-03	.0556	2.036E-03	.0676	2.28E-03	.0759	.1000 .650
169	550	21.386	3.982	5.588E-03	.1858	6.812E-03	.2265	7.64E-03	.2543	0 .700
170	543	3.742	.673	9.632E-04	.0320	1.173E-03	.0389	1.31E-03	.0437	.1000 .700
171	551	24.549	4.435	6.427E-03	.2137	7.837E-03	.2606	8.80E-03	.2927	0 .750
172	546	10.302	1.880	2.691E-03	.0861	3.154E-03	.1049	3.53E-03	.1177	.1000 .750
173	546	4.589	.852	1.224E-03	.0407	1.489E-03	.0495	1.67E-03	.0555	.2000 .750
175	544	1.328	.268	3.847E-04	.0128	4.680E-04	.0156	5.24E-04	.0175	.4000 .750
176	542	.405	.077	1.104E-04	.0037	1.342E-04	.0045	1.50E-04	.0050	.7000 .750
178	540	.672	.121	1.721E-04	.0057	2.093E-04	.0070	2.34E-04	.0078	.8000 .750
183	549	9.480	1.368	1.948E-03	.0648	2.373E-03	.0789	2.66E-03	.0886	0 .900
184	546	3.290	.593	8.526E-04	.0283	1.037E-03	.0345	1.16E-03	.0387	.2000 .900
185	541	1.100	.198	2.823E-04	.0094	3.431E-04	.0114	3.84E-04	.0128	.6000 .900
186	539	1.452	.261	3.708E-04	.0123	4.503E-04	.0150	5.04E-04	.0168	.8000 .900
									UPPER WING SURFACE
									A/C Y/S
129	545	7.564	1.156	1.659E-03	.0552	2.017E-03	.0671	2.26E-03	.0753	.1000 .100
130	543	3.456	.584	8.385E-04	.0278	1.017E-03	.0338	1.14E-03	.0379	.2000 .100
131	541	1.331	.246	3.517E-04	.0117	4.274E-04	.0142	4.78E-04	.0159	.4000 .100
132	539	.563	.111	1.578E-04	.0052	1.917E-04	.0064	2.14E-04	.0071	.7000 .100
133	537	.551	.096	1.359E-04	.0045	1.649E-04	.0055	1.84E-04	.0061	.9000 .100
143	544	7.985	1.611	2.310E-03	.0768	2.809E-03	.0934	3.15E-03	.1048	.1000 .250
145	543	2.352	.397	5.640E-04	.0189	6.919E-04	.0230	7.75E-04	.0258	.4000 .250
146	538	.781	.136	1.933E-04	.0064	2.347E-04	.0078	2.62E-04	.0087	.9000 .250
158	545	10.008	1.529	2.197E-03	.0730	2.673E-03	.0889	2.99E-03	.0997	.1000 .500
159	546	7.123	1.157	1.677E-03	.0558	2.041E-03	.0679	2.29E-03	.0761	.2000 .500
160	548	3.758	.616	8.879E-04	.0295	1.081E-03	.0360	1.21E-03	.0403	.4000 .500
161	542	1.408	.245	3.503E-04	.0116	4.264E-04	.0142	4.77E-04	.0159	.8000 .500
162	538	2.046	.276	3.953E-04	.0131	4.810E-04	.0160	5.37E-04	.0179	.9000 .500
179	551	17.240	3.115	4.512E-03	.1500	5.502E-03	.1829	6.17E-03	.2054	.1000 .750
180	549	7.827	1.412	2.038E-03	.0678	2.483E-03	.0826	2.78E-03	.0927	.2000 .750
181	549	6.068	.767	1.108E-03	.0368	1.349E-03	.0449	1.51E-03	.0504	.4000 .750
182	540	2.135	.360	5.139E-04	.0171	6.244E-04	.0208	6.99E-04	.0233	.8000 .750
									VERTICAL STABILIZER
									A/C Z/S
187	561	53.784	8.875	1.305E-02	.4337	1.595E-02	.5305	1.79E-02	.5971	0 .100
188	546	8.527	1.490	2.144E-03	.0713	2.610E-03	.0868	2.92E-03	.0974	.1000 .100
189	544	1.730	.293	4.197E-04	.0140	5.106E-04	.0170	5.72E-04	.0190	.4000 .100
191	544	.974	.186	2.669E-04	.0089	3.246E-04	.0108	3.64E-04	.0121	.8000 .100
192	558	36.413	7.003	1.025E-02	.3407	1.252E-02	.4164	1.40E-02	.4664	0 .250
193	549	10.771	1.885	2.723E-03	.0905	3.317E-03	.1103	3.72E-03	.1238	.1000 .250
194	548	2.354	.399	5.748E-04	.0191	7.001E-04	.0233	7.85E-04	.0261	.4000 .250
195	545	.985	.177	2.547E-04	.0085	3.099E-04	.0103	3.47E-04	.0116	.8000 .250
197	556	25.584	4.775	6.970E-03	.2317	8.512E-03	.2830	9.57E-03	.3182	.1000 .500
198	552	3.113	.563	8.159E-04	.0271	9.930E-04	.0331	1.11E-03	.0372	.4000 .500
200	546	1.344	.242	3.480E-04	.0116	4.236E-04	.0141	4.75E-04	.0158	.8000 .500
201	573	66.761	13.322	1.992E-02	.6623	2.446E-02	.8133	2.76E-02	.9179	0 .750
202	558	32.163	5.710	8.425E-03	.1804	8.028E-03	.2204	7.45E-03	.2479	.1000 .750
203	550	4.391	.505	1.304E-04	.0243	8.904E-04	.0296	9.99E-04	.0332	.4000 .750
204	544	2.793	.335	4.800E-04	.0160	5.838E-04	.0194	6.54E-04	.0218	.8000 .750

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366035

ARDC(AHO)INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
46	7	NAM=0+0	8.00	856.4	1329	-5.00	-1.00	-2.00	0	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RHEF-FR (R= .0001FT)	SIFR (R= .0001FT)	SWITCH POSITION
96.9	.0088	3.9930	3897	7.0600E-05	7.0756E-08	3.79E 06	6.8156E-02	2.9156E-02	1

TC NO	TG	DELTA	Q-MOD	HC(TO)	HC(TO)/HCREF	HC(ATO)	HC(ATO)/HCREF	HC(ASTO)	HC(ASTO)/HCREF	FUSELAGE X/L	FUSELAGE Y/YMAX
1	620	217.094	40.547	5.718E-02	.8390	7.0371E-02	1.0325	7.9548E-02	1.1672	0	0
2	557	60.932	10.038	1.299E-02	.1905	1.5884E-02	.2301	1.7502E-02	.2568	.0100	-0
3	544	19.111	3.022	3.468E-03	.0509	4.6294E-03	.0679	5.1542E-03	.0756	.0100	-.441
4	546	24.063	3.764	4.403E-03	.0705	5.7838E-03	.0849	6.4419E-03	.0945	.0100	-1.000
5	550	41.672	6.613	8.486E-03	.1245	1.0232E-02	.1501	1.1405E-02	.1673	.0100	0
6	547	27.236	4.611	5.470E-03	.0804	7.0954E-03	.1041	7.9037E-03	.1160	.0200	-0
7	543	18.426	3.315	4.215E-03	.0618	5.0726E-03	.0744	5.6470E-03	.0829	.0300	-0
8	543	12.171	2.123	2.698E-03	.0396	3.2469E-03	.0476	3.6143E-03	.0530	.0300	-.303
9	545	21.034	3.329	4.263E-03	.0622	5.1079E-03	.0749	5.6881E-03	.0835	.0300	-1.000
10	548	34.881	6.259	8.002E-03	.1174	9.6618E-03	.1415	1.0743E-02	.1576	.0300	0
11	543	12.352	2.424	3.084E-03	.0452	3.7112E-03	.0545	4.1316E-03	.0606	.0400	-0
12	539	5.944	1.174	1.485E-03	.0218	1.7858E-03	.0262	1.9867E-03	.0292	.0500	-0
13	539	7.150	1.400	1.773E-03	.0260	2.1317E-03	.0313	2.3716E-03	.0348	.0500	-.310
14	543	16.765	2.924	3.717E-03	.0545	4.4730E-03	.0656	4.9749E-03	.0731	.0500	-1.000
15	547	31.380	6.519	8.327E-03	.1222	1.0032E-02	.1472	1.1176E-02	.1640	.0500	0
16	538	2.756	.545	6.358E-04	.0084	7.6345E-04	.0077	5.8624E-04	.0085	.0800	-0
17	539	4.906	.827	1.047E-03	.0154	1.2596E-03	.0185	1.4002E-03	.0205	.0800	-.380
18	542	11.577	1.959	2.482E-03	.0364	2.9863E-03	.0438	3.3237E-03	.0488	.0800	-1.000
19	537	1.071	.198	2.696E-04	.0037	2.994HE-04	.0044	3.3348E-04	.0049	.1000	-0
20	539	2.129	.362	4.650E-04	.0050	2.9944E-04	.0034	2.7414E-04	.0040	.1000	-.383
21	540	2.417	.395	4.997E-04	.0073	6.0078E-04	.0088	6.6843E-04	.0098	.1000	-.817
22	543	10.990	1.877	2.514E-03	.0369	3.0292E-03	.0444	3.3677E-03	.0494	.1000	-1.000
23	542	10.532	1.894	2.407E-03	.0353	2.8962E-03	.0424	3.2239E-03	.0473	.1000	.783
24	546	22.169	4.229	5.397E-03	.0792	6.5005E-03	.0954	7.2403E-03	.1062	.1000	0
25	539	1.761	.757	9.582E-04	.0141	1.1521E-03	.0169	1.2817E-03	.0188	.1500	-.893
26	539	7.867	1.541	1.950E-03	.0286	2.3447E-03	.0344	2.6088E-03	.0383	.1500	-1.000
27	542	14.023	2.674	3.397E-03	.0498	4.0844E-03	.0600	4.5449E-03	.0667	.1500	.604
28	545	23.384	3.791	4.719E-03	.0692	5.6618E-03	.0834	6.3275E-03	.0928	.1500	0
29	538	3.466	.622	7.457E-04	.0115	9.4431E-04	.0139	1.0503E-03	.0154	.2000	-0
30	536	1.320	.259	3.268E-04	.0048	3.9263E-04	.0058	4.3659E-04	.0064	.2000	-.278
31	537	1.383	.248	3.602E-04	.0053	4.3281E-04	.0064	4.8129E-04	.0071	.2000	-.466
32	538	3.408	.666	8.422E-04	.0124	1.0122E-03	.0149	1.1259E-03	.0165	.2000	-.792
33	540	8.232	1.479	1.875E-03	.0275	2.2544E-03	.0331	2.5066E-03	.0368	.2000	-1.000
34	541	14.555	1.630	2.067E-03	.0303	2.4847E-03	.0365	2.7673E-03	.0406	.2000	.888
35	545	22.824	4.112	5.214E-03	.0769	6.3143E-03	.0926	7.0321E-03	.1032	.2000	0
36	591	152.560	25.567	3.465E-02	.5086	4.2260E-02	.6201	4.7476E-02	.6966	.2100	0
37	629	240.683	45.128	6.445E-02	.9457	7.9558E-02	1.1673	9.0119E-02	1.3223	.2200	0
38	570	93.354	14.963	1.969E-02	.2889	2.3869E-02	.3502	2.6700E-02	.3918	.2300	0
39	551	37.944	7.478	9.599E-03	.1408	1.1575E-02	.1698	1.2903E-02	.1893	.2400	.486
40	540	5.203	.821	1.041E-03	.0153	1.2520E-03	.0184	1.3931E-03	.0204	.2500	0
41	545	17.449	3.521	4.486E-03	.0658	5.4011E-03	.0792	6.0144E-03	.0882	.2700	.465
42	541	9.130	1.440	2.335E-03	.0343	2.8089E-03	.0412	3.1261E-03	.0459	.2700	.465
43	539	1.264	.193	2.438E-04	.0036	2.9313E-04	.0043	3.2604E-04	.0048	.2700	0
44	541	5.756	1.003	1.272E-03	.0187	1.5297E-03	.0224	1.7023E-03	.0250	.3000	-0
45	538	1.465	.271	3.422E-04	.0050	4.1131E-04	.0060	4.5744E-04	.0067	.3000	-.312
46	538	.812	.168	2.119E-04	.0031	2.5470E-04	.0037	2.8329E-04	.0042	.3000	-.504
47	540	2.265	.433	5.215E-04	.0062	5.0479E-04	.0074	5.6386E-04	.0083	.3000	-.857
48	540	4.001	.675	8.554E-04	.0126	1.0286E-03	.0151	1.1445E-03	.0168	.3000	-1.000
49	543	11.914	2.338	2.974E-03	.0436	3.5787E-03	.0429	3.9840E-03	.0585	.3000	.983
50	544	17.567	3.453	4.396E-03	.0645	5.2916E-03	.0776	5.8918E-03	.0864	.3000	.853
51	542	8.750	1.813	2.302E-03	.0338	2.7692E-03	.0406	3.0822E-03	.0452	.3000	.433
52	539	3.586	.741	9.387E-04	.0138	1.1296E-03	.0166	1.2557E-03	.0184	.3000	.301
53	539	1.565	.261	3.291E-04	.0048	3.9643E-04	.0058	4.4102E-04	.0065	.3000	0
54	541	6.126	1.201	1.523E-03	.0224	1.8324E-03	.0269	2.0392E-03	.0299	.4000	-0
55	538	1.072	.210	2.650E-04	.0039	3.1848E-04	.0047	3.5422E-04	.0052	.4000	-.321
56	537	.827	.162	2.042E-04	.0030	2.4543E-04	.0036	2.7297E-04	.0040	.4000	-.526
57	541	7.511	1.309	1.662E-03	.0244	1.9988E-03	.0293	2.2246E-03	.0326	.4000	-.951
58	543	10.594	1.907	2.425E-03	.0356	2.9144E-03	.0428	3.2490E-03	.0477	.4000	-1.000
59	545	14.962	3.621	4.614E-03	.0677	5.5548E-03	.0815	6.1856E-03	.0908	.4000	1.000
60	547	23.087	4.161	5.317E-03	.0780	6.4053E-03	.0940	7.1352E-03	.1047	.4000	.906
61	545	12.452	2.242	2.858E-03	.0419	3.4414E-03	.0505	3.8324E-03	.0562	.4000	.750
62	548	19.728	2.693	3.198E-03	.0468	3.8413E-03	.0564	4.2797E-03	.0628	.4000	0
63	547	14.769	2.682	3.401E-03	.0499	4.0996E-03	.0601	4.5636E-03	.0670	.4500	-1.000
64	545	12.591	2.543	3.243E-03	.0476	3.9048E-03	.0573	4.3487E-03	.0638	.4500	1.000
65	549	12.662	2.349	2.995E-03	.0439	3.6060E-03	.0529	4.0157E-03	.0589	.4500	.990
66	542	6.375	1.181	1.501E-03	.0220	1.8060E-03	.0265	2.0103E-03	.0295	.5000	-0
67	539	.874	.167	2.108E-04	.0031	2.5366E-04	.0037	2.8199E-04	.0041	.5000	-.277
68	539	1.453	.285	3.603E-04	.0053	4.3324E-04	.0064	4.8201E-04	.0071	.5000	-.553
69	541	3.041	.563	7.141E-04	.0105	8.5898E-04	.0126	9.5593E-04	.0140	.5000	-.830
70	545	10.010	1.912	2.437E-03	.0358	2.9337E-03	.0430	3.2669E-03	.0479	.5000	-1.000
72	544	10.820	2.188	2.782E-03	.0408	3.3495E-03	.0491	3.7298E-03	.0547	.5000	1.000
73	545	9.525	1.767	2.253E-03	.0331	2.7128E-03	.0398	3.0211E-03	.0443	.5000	.886
74	546	9.937	1.790	2.283E-03	.0335	2.7498E-03	.0403	3.0626E-03	.0449	.5000	.640
75	546	12.952	2.334	2.981E-03	.0437	3.5899E-03	.0527	3.9987E-03	.0587	.5000	0
76	544	6.926	1.133	1.442E-03	.0212	1.7356E-03	.0255	1.9324E-03	.0284	.5500	-0
77	541	6.498	1.026	1.301E-03	.0191	1.5641E-03	.0230	1.7405E-03	.0255	.5500	-1.000
78	540	4.861	.744	9.419E-04	.0138	1.1326E-03	.0166	1.2601E-03	.0185	.5500	1.000
79	540	5.851	1.083	1.372E-03	.0201	1.6500E-03	.0242	1.8359E-03	.0269	.5500	.935
80	541	6.589	1.256	1.593E-03	.0234	1.9158E-03	.0281	2.1320E-03	.0313	.6000	-0
81	539	1.141	.236	2.987E-04	.0044	3.5908E-04	.0053	3.9949E-04	.0059	.6000	-.249
83	539	1.109	.217	2.747E-04	.0040	3.3017E-04	.0048	3.6728E-04	.0054	.6000	-.748
84	533	1.602	.321	4.034E-04	.0059	4.842HE-04	.0071	5.3820E-04	.0079	.6000	-1.000
85	539	2.075	.372	4.715E-04	.0069	5.6690E-04	.0083	6.3071E-04	.0093	.6000	1.000
86	541	3.972	.757	9.594E-04	.0141	1.1538E-03	.0169	1.2839E-03	.0188	.6000	.907
87	546	10.176	1.778	2.262E-03	.0332	2.7231E-03	.0400	3.0321E-03	.0445	.6000	0
88	543	8.976	1.254	1.595E-03	.0234	1.9195E-03	.0282	2.1369E-03	.0314	.6500	-0
89	543	6.675	1.237	1.572E-03	.0231	1.8915E-03	.0278	2.1055E-03	.0309	.7000	-0
90	541	1.789	.351	4.465E-04	.0065	5.3463E-04	.0078	5.9492E-04	.0087	.7000	-.235
91	540	1.301	.255	3.229E-04	.0047	3.8827E-04	.0057	4.3200E-04	.0063	.7000	-.469
92	541	.917	.170	2.154E-04	.0032	2.5912E-04	.0038	2.8838E-04	.0042	.7000	-.704
93	539	.617	.124	1.571E-04	.0023	1.8886E-04	.0028	2.1011E-04	.0031	.7000	-.848
94	545	10.515	2.296	2.928E-03	.0430	3.5253E-03	.0517	3.9261E-03	.0576	.7000	1.000
95	541	2.066	.371	4.706E-04	.0069	5.6603E-04	.0083	6.2989E-04	.0092	.7000	.908
96	545	8.905	1.603	2.043E-03	.0300	2.4596E-03	.0361	2.7389E-03	.0402	.7000	0
97	546	5.793	1.074	1.367E-03	.0201	1.6458E-03	.0241	1.8324E-03	.0269	.7500	-0
98	542	5.405	.943	1.198E-03	.0176	1.4411E-03	.0211	1.6041E-03	.0235	.8000	-0

GROUP 110

AEDC(AHO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
46	7	KAH-040	8.00	855.0	1324	-5.00	-3.00	-2.00	0	0

T-INF (DEG R)	P-INF (PSIA)	U-INF (FT/SEC)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RHEF-FR (M= .009FT)	SIFR (M= .009FT)	SWITCH POSITION
96.0	.0MP	3.926	.0M0	7.692E-05	7.727E-08	3.MIP 06	6.80RE-02	2.909E-07	2

TC NO	IW	DT=CT	U=DOT	M(TO)	M(TO)/MMEF	M(.9TO)	M(.9TO)/MMEF	M(.85TO)	M(.85TO)/MMEF	
										FUSELAGE
										A/L Y/YMAX
99	540	2.387	.455	5.794E-04	.0085	6.970OE-04	.0102	7.757OE-04	.0114	.8000 -.223
100	539	.MIP	.167	2.12PE-04	.0031	2.554JE-04	.0039	2.84H0E-04	.0042	.8000 -.446
101	542	.940	.195	2.465E-04	.0037	2.941SE-04	.0044	3.3306E-04	.0049	.8000 -.664
102	542	1.021	.211	2.703E-04	.0040	3.2935E-04	.0049	3.6227E-04	.0053	.8000 -.806
103	543	1.950	.775	9.926E-04	.0146	1.1990E-03	.0176	1.330ME-03	.0195	.8500 -0
104	542	3.694	.664	8.491E-04	.0125	1.0222E-03	.0150	1.13H2E-03	.0167	.9000 -0
105	541	2.279	.447	5.704E-04	.0084	6.884ME-04	.0101	7.6625E-04	.0112	.9000 -.226
106	540	.717	.141	1.793E-04	.0026	2.1548E-04	.0032	2.4000E-04	.0035	.9000 -.452
107	542	1.237	.222	2.M41E-04	.0042	3.4202E-04	.0050	3.80M0E-04	.0056	.9000 -.678
108	542	.627	.116	1.483E-04	.0022	1.7856E-04	.0026	1.9881E-04	.0029	.9000 -.817
109	545	2.664	.542	6.452E-04	.0102	8.3747E-04	.0123	9.3293E-04	.0137	.9000 1.000
110	544	1.492	.629	8.055E-04	.0118	9.7014E-04	.0143	1.0806E-03	.0159	.9000 .884
111	546	5.71M	.936	1.203E-03	.0177	1.4492E-03	.0213	1.6146E-03	.0237	.9000 .610
112	542	2.932	.559	7.150E-04	.0105	8.6073E-04	.0126	9.5843E-04	.0141	.9500 -0
114	541	2.644	.504	6.433E-04	.0094	7.7414E-04	.0114	H.6180E-04	.0127	.9900 -0
115	543	5.21M	1.024	1.310E-03	.0192	1.5776E-03	.0232	1.7569E-03	.0258	.9900 -.253
116	544	5.147	1.010	1.294E-03	.0190	1.5584E-03	.0229	1.735HE-03	.0255	.9900 -.507
117	545	7.150	1.405	1.802E-03	.0265	2.1714E-03	.0319	2.41M1E-03	.0355	.9900 -.660
118	549	10.83M	1.956	2.522E-03	.0370	3.0417E-03	.0447	3.3909E-03	.0498	.9900 -.793
119	545	7.473	1.466	1.MA0E-03	.0277	2.2697E-03	.0333	2.5285E-03	.0371	.9900 .780
120	542	17.763	2.043	2.644E-03	.0388	3.1913E-03	.0469	3.5545E-03	.0523	.9900 .305
										LOWER WING SURFACE
										A/C Y/S
121	541	44.714	9.341	1.228E-02	.1806	1.4M58E-02	.2142	1.6549E-02	.2438	0 .050
122	544	46.058	8.216	1.080E-02	.1586	1.3074E-02	.1920	1.4614E-02	.2147	0 .100
124	546	2.174	.392	5.029E-04	.0074	6.0590E-04	.0089	6.7507E-04	.0099	.2000 .100
126	542	.490	.083	1.058E-04	.0016	1.2731E-04	.0019	1.4176E-04	.0021	.6000 .100
127	542	.428	.077	9.M47E-05	.0014	1.1853E-04	.0017	1.3194E-04	.0019	.7000 .100
128	540	.43M	.060	7.600E-05	.0011	9.1643E-05	.0013	1.0179E-04	.0015	.9000 .100
134	543	91.934	18.928	2.554E-02	.3751	3.1095E-02	.4568	3.4890E-02	.5125	0 .150
135	542	55.265	10.043	1.318E-02	.1936	1.5948E-02	.2343	1.7822E-02	.2618	0 .250
136	546	8.991	1.620	2.041E-03	.0300	2.5077E-03	.0368	2.7941E-03	.0410	.1000 .250
137	544	4.33M	.734	9.403E-04	.0138	1.1326E-03	.0166	1.2616E-03	.0185	.2000 .250
138	546	1.662	.312	4.007E-04	.0059	4.82H6E-04	.0071	5.3747E-04	.0079	.4000 .250
140	547	1.276	.223	2.875E-04	.0042	3.4651E-04	.0051	3.H017E-04	.0057	.6000 .250
142	543	.903	.148	1.H90E-04	.0028	2.2755E-04	.0033	2.5340E-04	.0037	.9000 .250
147	570	67.501	12.685	1.680E-02	.2468	2.0381E-02	.2994	2.2807E-02	.3350	0 .450
148	568	10.222	1.844	2.377E-03	.0349	2.8859E-03	.0421	3.1947E-03	.0469	.1000 .450
149	566	56.952	10.681	1.408E-02	.2068	1.7095E-02	.2505	1.9071E-02	.2801	0 .500
150	569	10.243	2.016	2.600E-03	.0382	3.1352E-03	.0461	3.4951E-03	.0513	.1000 .500
151	568	4.459	.884	1.138E-03	.0167	1.3726E-03	.0202	1.5306E-03	.0225	.2000 .500
152	552	3.868	.677	8.761E-04	.0129	1.0574E-03	.0155	1.1795E-03	.0173	.4000 .500
154	551	1.746	.315	4.080E-04	.0060	4.9236E-04	.0072	5.4911E-04	.0081	.6000 .500
156	549	1.164	.185	2.380E-04	.0035	2.8704E-04	.0042	3.1999E-04	.0047	.8000 .500
157	544	.806	.145	1.856E-04	.0027	2.2381E-04	.0033	2.4873E-04	.0037	.9000 .500
163	562	48.129	9.012	1.183E-02	.1737	1.4314E-02	.2103	1.5996E-02	.2350	0 .550
164	561	12.961	2.413	3.122E-03	.0459	3.7674E-03	.0553	4.2018E-03	.0617	.1000 .550
165	565	44.507	8.344	1.099E-02	.1614	1.3309E-02	.1955	1.4881E-02	.2186	0 .600
166	563	13.781	2.492	3.229E-03	.0474	3.8978E-03	.0573	4.3483E-03	.0639	.1000 .600
167	563	39.742	7.225	9.491E-03	.1394	1.1490E-02	.1688	1.2842E-02	.1886	0 .650
168	554	14.597	2.881	3.741E-03	.0550	4.5182E-03	.0664	5.0419E-03	.0741	.1000 .650
169	574	54.949	10.042	1.338E-02	.1965	1.6240E-02	.2386	1.8188E-02	.2672	0 .700
170	556	16.367	2.965	3.861E-03	.0567	4.6655E-03	.0685	5.2081E-03	.0765	.1000 .700
171	578	64.377	11.742	1.580E-02	.2321	1.9211E-02	.2822	2.1534E-02	.3163	0 .750
172	562	26.064	4.591	6.018E-03	.0884	7.2827E-03	.1070	8.1375E-03	.1195	.1000 .750
173	561	20.437	3.825	5.013E-03	.0736	6.0666E-03	.0891	6.7786E-03	.0996	.2000 .750
175	558	9.391	1.909	2.492E-03	.0366	3.0122E-03	.0442	3.3636E-03	.0494	.4000 .750
176	550	.654	.126	1.626E-04	.0024	1.9620E-04	.0029	2.1876E-04	.0032	.7000 .750
178	546	1.361	.249	3.199E-04	.0047	3.8557E-04	.0057	4.2965E-04	.0063	.8000 .750
183	547	M1.208	11.771	1.548E-02	.2345	1.9461E-02	.2859	2.1853E-02	.3210	0 .900
184	559	9.639	1.748	2.283E-03	.0335	2.7607E-03	.0406	3.0831E-03	.0453	.2000 .900
185	568	3.044	.549	7.072E-04	.0104	8.5273E-04	.0125	9.5050E-04	.0140	.6000 .900
186	565	3.551	.640	8.210E-04	.0121	9.8916E-04	.0145	1.1020E-03	.0162	.8000 .900
										UPPER WING SURFACE
										A/C Y/S
129	556	28.331	4.355	5.671E-03	.0833	6.8533E-03	.1007	7.6505E-03	.1124	.1000 .100
130	551	13.860	2.352	3.041E-03	.0447	3.6694E-03	.0539	4.0922E-03	.0601	.2000 .100
131	549	7.342	1.365	1.760E-03	.0259	2.1224E-03	.0312	2.3660E-03	.0348	.4000 .100
132	547	2.61M	.539	6.928E-04	.0102	8.3561E-04	.0123	9.3051E-04	.0137	.7000 .100
133	544	2.656	.463	5.937E-04	.0087	7.1499E-04	.0105	7.9635E-04	.0117	.9000 .100
143	555	29.555	6.007	7.807E-03	.1147	9.4302E-03	.1385	1.0526E-02	.1546	.1000 .250
145	554	12.440	2.115	2.745E-03	.0403	3.3149E-03	.0487	3.6988E-03	.0543	.4000 .250
146	546	3.640	.636	8.171E-04	.0120	9.8459E-04	.0145	1.0970E-03	.0161	.9000 .250
158	560	36.106	5.560	7.273E-03	.1068	8.7971E-03	.1292	9.8267E-03	.1443	.1000 .500
159	563	35.061	5.799	7.616E-03	.1119	9.2200E-03	.1354	1.0305E-02	.1514	.2000 .500
160	564	24.114	3.986	5.240E-03	.0770	6.3450E-03	.0932	7.0926E-03	.1042	.4000 .500
161	551	6.366	1.115	1.443E-03	.0212	1.7413E-03	.0256	1.9421E-03	.0285	.8000 .500
162	547	8.155	1.114	1.433E-03	.0211	1.7275E-03	.0254	1.9252E-03	.0283	.9000 .500
179	571	50.236	9.171	1.218E-02	.1789	1.4777E-02	.2171	1.6542E-02	.2430	.1000 .750
180	567	30.233	5.508	7.274E-03	.1069	8.8163E-03	.1295	9.8616E-03	.1449	.2000 .750
181	571	34.820	6.429	8.477E-03	.0884	7.1302E-03	.1047	7.9810E-03	.1172	.4000 .750
182	552	12.822	2.177	2.818E-03	.0414	3.4010E-03	.0500	3.7934E-03	.0557	.8000 .750
										VERTICAL STABILIZER
										A/C Z/S
187	594	118.028	19.804	2.711E-02	.3983	3.3120E-02	.4865	3.7245E-02	.5471	0 .100
188	595	18.443	3.238	4.209E-03	.0618	5.0842E-03	.0747	5.6742E-03	.0833	.1000 .100
189	592	5.307	.941	1.167E-03	.0171	1.4040E-03	.0207	1.5712E-03	.0231	.4000 .100
191	592	4.433	.850	1.101E-03	.0162	1.3293E-03	.0195	1.4829E-03	.0218	.8000 .100
192	581	90.639	17.636	2.373E-02	.3486	2.8883E-02	.4243	3.2396E-02	.4759	0 .250
193	598	22.945	4.035	5.248E-03	.0774	6.3684E-03	.0936	7.1123E-03	.1045	.1000 .250
194	595	9.160	.878	1.141E-03	.0168	1.3790E-03	.0203	1.5391E-03	.0226	.4000 .250
195	592	1.683	.304	3.939E-04	.0058	4.7566E-04	.0070	5.3036E-04	.0078	.8000 .250
197	576	63.694	11.495	1.548E-02	.2348	1.9406E-02	.2891	2.1735E-02	.3193	.1000 .500
198	560	7.575	1.375	1.798E-03	.0284	2.1742E-03	.0319	2.4285E-03	.0357	.4000 .500
200	553	3.044	.550	7.133E-04	.0105	8.6115E-04	.0126	9.6068E-04	.0141	.8000 .500
201	616	158.887	31.411	4.432E-02	.6511	5.4509E-02	.8007	6.1587E-02	.9047	0 .750
202	573	74.209	8.630	1.149E-02	.1688	1.3991E-02	.2049	1.5823E-02	.2295	.1000 .750
203	559	10.896	1.458	1.843E-03	.0441	1.9868E-03	.0292	2.2189E-03	.0326	.4000 .750
204	551	5.932	.714	9.233E-04	.0136	1.1140E-03	.0164	1.2423E-03	.0182	.8000 .750

GROUP
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366047

366048

AEDC(AMD),INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREHEND	ROLL-MODEL	YAW
47	7	KAM-UAO	8.00	857.4	1129	.07	2.07	-2.00	0	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	PU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RNEP-FM (RN *.0001)	SIFM (RN *.0001)	SWITCH POSITION
96.0	.0484	3.4935	3462	7.6072E-05	7.1322E-08	3.81E 06	6.8160E-02	2.9088E-02	1

TC NO	TB	D(PSI)	Q-INF	M(TO)	M(TO)/MNEP	P(.9TO)	M(.9TO)/MNEP	M(.85TO)	M(.85TO)/MNEP	FUSELAGE X/L	FUSELAGE Y/YMAX
1	611	230.594	42.894	6.005E-02	.8811	7.3716E-02	1.0819	8.3216E-02	1.2209	0	0
2	554	74.868	12.279	1.593E-02	.2337	1.9236E-02	.2822	2.1466E-02	.3149	.0100	-0
3	562	27.439	4.316	5.519E-03	.0813	6.6679E-03	.0978	7.4245E-03	.1089	.0100	-.441
4	561	25.104	3.928	5.080E-03	.0746	5.8725E-03	.0862	6.5370E-03	.0959	.0100	-1.000
5	544	31.019	4.905	6.274E-03	.0921	7.5594E-03	.1109	8.4142E-03	.1235	.0100	0
6	547	35.550	5.619	7.174E-03	.1134	9.3136E-03	.1366	1.037HE-02	.1523	.0200	-0
7	562	27.167	4.289	5.238E-03	.0915	7.5092E-03	.1102	8.3608E-03	.1227	.0300	-0
8	562	19.412	3.069	3.817E-03	.0933	5.1955E-03	.0762	5.7841E-03	.0849	.0300	-.303
9	561	14.553	3.098	3.419E-03	.0574	4.7334E-03	.0695	5.2764E-03	.0774	.0300	-1.000
10	566	25.068	4.511	5.772E-03	.0967	6.9560E-03	.1020	7.7403E-03	.1136	.0300	0
11	562	19.541	3.433	4.495E-03	.0718	5.8924E-03	.0865	6.5607E-03	.0963	.0400	-0
12	560	10.849	2.134	2.719E-03	.0399	3.2696E-03	.0480	3.6390E-03	.0534	.0500	-0
13	560	11.402	2.239	2.846E-03	.0418	3.4231E-03	.0502	3.8107E-03	.0559	.0500	-.310
14	561	15.951	2.774	3.544E-03	.0520	4.2643E-03	.0626	4.7470E-03	.0696	.0500	-1.000
15	562	20.654	4.278	5.469E-03	.0801	6.5721E-03	.0964	7.3173E-03	.1074	.0500	0
16	561	6.149	.770	9.820E-04	.0144	1.1817E-03	.0173	1.3154E-03	.0193	.0800	-0
17	562	7.417	1.253	1.598E-03	.0235	1.9234E-03	.0282	2.1418E-03	.0314	.0800	-.360
18	564	10.840	1.799	2.302E-03	.0338	2.7719E-03	.0407	3.0871E-03	.0453	.0800	-1.000
19	561	2.852	.491	6.259E-04	.0092	7.5313E-04	.0110	8.3835E-04	.0123	.1000	-0
20	562	4.824	.807	1.026E-03	.0150	1.2355E-03	.0181	1.3761E-03	.0202	.1000	-.383
21	563	3.699	.624	7.971E-04	.0117	9.5917E-04	.0140	1.0346E-03	.0152	.1000	-.817
22	565	9.548	1.719	2.204E-03	.0323	2.6547E-03	.0390	2.9578E-03	.0434	.1000	-1.000
23	567	7.512	1.356	1.739E-03	.0255	2.0952E-03	.0307	2.3346E-03	.0343	.1000	.783
24	550	13.985	2.478	3.453E-03	.0507	4.1645E-03	.0611	4.6429E-03	.0681	.1000	0
25	561	5.017	1.011	1.298E-03	.0189	1.5504E-03	.0227	1.7259E-03	.0253	.1500	-.893
26	561	7.675	1.509	1.941E-03	.0281	2.3095E-03	.0339	2.5694E-03	.0377	.1500	-1.000
27	564	9.481	1.806	2.312E-03	.0339	2.7641E-03	.0408	3.1009E-03	.0455	.1500	.664
28	568	15.58H	2.971	3.819E-03	.0566	4.5819E-03	.0682	5.2709E-03	.0627	.1500	0
29	536	1.476	.284	3.650E-04	.0044	4.0253E-04	.0059	4.4768E-04	.0066	.2000	-0
30	535	1.951	.381	4.819E-04	.0071	5.3842E-04	.0080	6.4332E-04	.0094	.2000	-.278
31	536	3.447	.711	9.012E-04	.0132	1.0H30E-03	.0159	1.2046E-03	.0177	.2000	-.466
32	537	5.4H3	1.070	1.356E-03	.0199	1.6629HE-03	.0239	1.8129E-03	.0266	.2000	-.792
33	539	H.080	1.558	1.980E-03	.0291	2.3H14E-03	.0349	2.6498E-03	.0389	.2000	-1.000
34	542	5.477	1.044	1.342E-03	.0196	1.6037E-03	.0235	1.7855E-03	.0262	.2000	.888
35	546	10.069	2.305	2.920E-03	.0434	3.5205E-03	.0746	3.7998E-03	.0451	.2000	0
36	573	102.H69	17.022	2.263E-02	.3321	2.7474E-02	.4031	3.0765E-02	.4514	.2100	0
37	607	192.785	35.795	4.985E-02	.7316	6.1131E-02	.8969	6.8932E-02	1.0114	.2200	0
38	585	124.695	20.141	2.721E-02	.3993	3.3149E-02	.4864	3.7208E-02	.5459	.2300	0
39	561	27.486	5.410	6.9H8E-03	.1025	8.4312E-03	.1237	9.4022E-03	.1379	.2400	.486
40	546	7.955	1.259	1.615E-03	.0237	1.9459E-03	.0286	2.1679E-03	.0318	.2500	0
41	561	20.555	4.163	5.376E-03	.0788	6.4832E-03	.0951	7.2292E-03	.1061	.2700	.465
42	546	7.219	1.458	1.870E-03	.0274	2.2535E-03	.0331	2.5107E-03	.0368	.2700	.465
43	545	1.871	.296	3.663E-04	.0054	4.4117E-04	.0065	4.9143E-04	.0072	.2700	0
44	542	2.711	.473	6.034E-04	.0089	7.2693E-04	.0107	8.0966E-04	.0119	.3000	-0
45	540	1.179	.218	2.779E-04	.0041	3.3432E-04	.0049	3.7211E-04	.0055	.3000	-.312
46	542	3.039	.629	8.039E-04	.0118	9.6718E-04	.0142	1.0769E-03	.0158	.3000	-.504
47	545	4.152	.812	1.034E-03	.0115	1.2453E-03	.0138	1.3810E-03	.0154	.3000	-.857
48	545	3.852	.652	8.351E-04	.0123	1.0060E-03	.0148	1.1207E-03	.0164	.3000	-1.000
49	547	4.607	.906	1.165E-03	.0171	1.403HE-03	.0206	1.5644E-03	.0230	.3000	.983
50	554	13.447	2.654	3.442E-03	.0505	4.1543E-03	.0610	4.6375E-03	.0680	.3000	.853
51	551	9.034	1.479	2.428E-03	.0356	2.9292E-03	.0430	3.2666E-03	.0479	.3000	.433
52	548	3.704	.769	9.901E-04	.0145	1.1937E-03	.0175	1.3305E-03	.0195	.3000	.361
53	547	.957	.169	2.167E-04	.0032	2.6110E-04	.0038	2.9094E-04	.0043	.3000	0
54	544	3.405	.708	9.066E-04	.0133	1.0919E-03	.0160	1.2162E-03	.017H	.4000	-0
55	542	.738	.149	1.947E-04	.0027	2.2231E-04	.0033	2.4750E-04	.0036	.4000	-.321
56	543	2.702	.530	6.778E-04	.0099	8.1607E-04	.0120	9.0874E-04	.0133	.4000	-.526
57	548	9.624	1.643	2.166E-03	.0314	2.6120E-03	.0383	2.9113E-03	.0427	.4000	-.951
58	547	6.154	1.117	1.439E-03	.0211	1.7247E-03	.0254	1.9274E-03	.0283	.4000	-1.000
59	546	4.356	.833	1.069E-03	.0157	1.28HIE-03	.0189	1.4352E-03	.0211	.4000	1.000
60	553	17.082	3.090	4.003E-03	.0587	4.8323E-03	.0709	5.3910E-03	.0791	.4000	.906
61	555	19.544	3.539	4.596E-03	.0674	5.5519E-03	.0815	6.1960E-03	.0909	.4000	.750
62	551	9.207	.668	8.620E-04	.0126	1.0400E-03	.0153	1.1596E-03	.0170	.4000	0
63	546	7.030	1.267	1.626E-03	.0239	1.9594E-03	.0288	2.1838E-03	.0320	.4500	-1.000
64	548	6.702	1.355	1.742E-03	.0256	2.0998E-03	.0308	2.3401E-03	.0343	.4500	1.000
65	555	14.310	3.415	4.430E-03	.0650	5.3504E-03	.0785	5.9703E-03	.0876	.4500	.990
66	549	2.369	.H10	1.03HE-03	.0152	1.2501E-03	.0183	1.3926E-03	.0204	.5000	-0
67	543	1.117	.213	2.724E-04	.0040	3.2880E-04	.0048	3.6625E-04	.0054	.5000	-.277
68	544	2.184	.429	5.48HE-04	.0080	6.6049E-04	.0097	7.3559E-04	.010H	.5000	-.553
69	545	3.235	.971	1.249E-03	.0183	1.5004E-03	.0220	1.6715E-03	.0245	.5000	-.830
70	550	11.264	2.163	2.790E-03	.0409	3.3653E-03	.0494	3.7521E-03	.0551	.5000	-1.000
71	552	13.809	2.798	3.619E-03	.0531	4.3672E-03	.0641	4.8709E-03	.0715	.5000	1.000
72	556	16.519	3.090	3.998E-03	.0586	4.8257E-03	.070H	5.3847E-03	.0790	.5000	.886
73	555	11.845	2.163	2.798E-03	.0410	3.3606E-03	.0493	3.7503E-03	.0550	.5000	.640
74	554	H.767	1.546	2.057E-03	.0302	2.4832E-03	.0364	2.7707E-03	.0407	.5000	0
75	549	4.995	.H19	1.055E-03	.0155	1.2720E-03	.0187	1.4179E-03	.020H	.5500	-0
76	548	1.959	.310	3.994E-04	.0059	4.8146E-04	.0071	5.3661E-04	.0079	.5500	-1.000
77	552	9.166	1.466	1.H17E-03	.0267	2.1932E-03	.0322	2.4462E-03	.0359	.5500	1.000
78	553	9.049	1.686	2.182E-03	.0320	2.6363E-03	.0387	2.9366E-03	.0431	.5500	.935
79	553	4.310	.H29	1.057E-03	.0155	1.27HIE-03	.0187	1.4146E-03	.020H	.6000	-0
80	566	1.247	.269	3.453E-04	.0051	4.1601E-04	.0061	4.6349E-04	.0068	.6000	-.249
81	550	3.102	.611	7.H77E-04	.0116	9.5001E-04	.0139	1.0592E-03	.0155	.6000	-.748
82	545	.759	.152	1.930E-04	.0028	2.3191E-04	.0034	2.5790E-04	.0038	.6000	-1.000
83	552	4.460	.H10	1.047E-03	.0156	1.2633E-03	.0185	1.4069E-03	.0207	.6000	1.000
84	551	5.585	1.070	1.343E-03	.0203	1.6087E-03	.0245	1.8010E-03	.0273	.6000	.907
85	555	8.87H	1.558	2.022E-03	.0297	2.4417E-03	.0358	2.7247E-03	.0400	.6000	0
86	549	3.952	.713	9.189E-04	.0135	1.1081E-03	.0163	1.2353E-03	.0181	.6500	-0
87	547	3.881	.721	9.261E-04	.0136	1.1161E-03	.0164	1.2437E-03	.0182	.7000	-0
88	546	1.573	.309	3.970E-04	.0058	4.7839E-04	.0070	5.3303E-04	.0078	.7000	-.235
89	547	.962	.189	2.432E-04	.0036	2.9309E-04	.0043	3.2681E-04	.0048	.7000	-.469
90	552	1.535	.298	3.696E-04	.0054	4.4603E-04	.0065	4.9748E-04	.0073	.7000	-.704
91	553	2.040	.424	5.484E-04	.0080	6.6200E-04	.0097	7.3846E-04	.0108	.7000	-.848
92	556	5.113	1.122	1.459E-03	.0214	1.7623E-03	.0259	1.9669E-03	.0289	.7000	1.000
93	549	5.385	.972	1.252E-03	.0184	1.5097E-03	.0221	1.6829E-03	.0247	.7000	.908
94	552	7.603	1.375	1.778E-03	.0261	2.1464E-03	.0315	2.3942E-03	.0351	.7000	0
95	547	4.025	.768	9.610E-04	.0141	1.1583E-03	.0170	1.2908E-03	.0189	.7500	-0
96	546	4.589	.802	1.028E-03	.0151	1.2388E-03	.0182	1.3801E-03	.0202	.8000	-0

GROUP
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366051

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V11167

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
47	1	KAM-080	8.00	803.0	1335	.04	2.08	-2.00	0	0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RREF-FM (IN=.009FT)	SIFM (IN=.009FT)	SWITCH POSITION
96.7	.0488	3.960	3850	7.8968E-05	7.7689E-08	3.17QE 06	8.847E-02	2.911E-02	2

PC NO	TM	CD(BC)	CA(BC)	M(BO)	M(BO)/MREF	PC.9(BO)	M(.9BO)/MREF	M(.85BO)	M(.85BO)/MREF
									FUSELAGE
									A/L Y/YMAX
99	544	2.343	.447	5.455E-04	.0083	6.8041E-04	.0099	7.5732E-04	.0111	.8000 -.223
100	543	1.084	.207	2.608E-04	.0038	3.1342E-04	.0046	3.4897E-04	.0051	.8000 -.446
101	545	1.015	.211	2.663E-04	.0039	3.2043E-04	.0047	3.5667E-04	.0052	.8000 -.669
102	545	1.251	.260	3.287E-04	.0048	3.9554E-04	.0058	4.4030E-04	.0064	.8000 -.806
103	547	3.418	.672	8.529E-04	.0125	1.0260E-03	.0150	1.1425E-03	.0167	.8500 -0
104	546	3.134	.596	7.613E-04	.0105	8.8215E-04	.0128	9.5993E-04	.0140	.9000 -0
105	548	2.531	.497	6.299E-04	.0092	7.5813E-04	.0111	8.4400E-04	.0123	.9000 -.226
106	545	1.132	.222	2.816E-04	.0041	3.3892E-04	.0049	3.7693E-04	.0055	.9000 -.452
107	546	.675	.122	1.541E-04	.0023	1.8548E-04	.0027	2.0849E-04	.0030	.9000 -.678
108	546	.499	.091	1.153E-04	.0017	1.3877E-04	.0020	1.5450E-04	.0023	.9000 -.817
109	548	2.527	.511	6.498E-04	.0095	7.8256E-04	.0114	8.7163E-04	.0127	.9000 1.000
110	547	2.499	.450	5.714E-04	.0083	6.8813E-04	.0101	7.6627E-04	.0112	.9000 .884
111	548	3.073	.504	6.407E-04	.0094	7.7165E-04	.0113	8.5949E-04	.0126	.9000 .610
112	547	2.719	.490	6.596E-04	.0096	7.9405E-04	.0116	8.8420E-04	.0129	.9500 -0
114	544	2.738	.523	6.612E-04	.0097	7.9551E-04	.0116	8.8565E-04	.0129	.9900 -0
115	546	2.964	.543	7.37HE-04	.0108	8.8796E-04	.0130	9.8853E-04	.0144	.9900 -.253
116	546	3.388	.646	8.446E-04	.0123	1.0167E-03	.0148	1.1320E-03	.0165	.9900 -.507
117	548	3.712	.710	9.274E-04	.0135	1.1168E-03	.0163	1.2437E-03	.0182	.9900 -.660
118	550	4.060	.805	1.025E-03	.0150	1.2347E-03	.0180	1.3755E-03	.0201	.9900 -.793
119	547	4.561	.847	1.138E-03	.0166	1.3707E-03	.0200	1.5264E-03	.0223	.9900 .780
120	547	14.964	1.725	2.216E-03	.0324	2.6746E-03	.0391	2.9813E-03	.0436	.9900 .305
									LOWER WING SURFACE
									A/C Y/S
121	547	61.835	11.946	1.555E-02	.2272	1.8829E-02	.2750	2.1039E-02	.3073	0 .050
122	548	57.962	9.928	1.294E-02	.1890	1.5664E-02	.2288	1.7508E-02	.2557	0 .100
124	547	4.608	.831	1.054E-03	.0154	1.2496E-03	.0183	1.4128E-03	.0206	.2000 .100
126	546	1.626	.275	3.485E-04	.0051	4.1965E-04	.0061	4.6847E-04	.0068	.6000 .100
127	546	1.354	.244	3.093E-04	.0045	3.7228E-04	.0054	4.1449E-04	.0061	.7000 .100
128	544	.662	.098	1.141E-04	.0017	1.3731E-04	.0020	1.5248E-04	.0022	.9000 .100
134	548	88.329	14.139	2.348E-02	.3399	2.9048E-02	.4248	3.2569E-02	.4757	0 .150
135	543	96.367	10.241	1.327E-02	.1938	1.6043E-02	.2343	1.7916E-02	.2617	0 .250
136	546	11.774	2.122	2.690E-03	.0393	3.2386E-03	.0473	3.6059E-03	.0527	.1000 .250
137	545	6.808	1.151	1.456E-03	.0213	1.7519E-03	.0256	1.9501E-03	.0285	.2000 .250
138	547	4.742	.890	1.129E-03	.0165	1.3588E-03	.0199	1.5142E-03	.0221	.4000 .250
140	550	3.957	.693	8.827E-04	.0129	1.0637E-03	.0155	1.1851E-03	.0173	.6000 .250
142	546	1.015	.166	2.108E-04	.0031	2.5375E-04	.0037	2.8256E-04	.0041	.9000 .250
147	545	57.103	10.705	1.390E-02	.2030	1.6811E-02	.2455	1.8780E-02	.2743	0 .450
148	549	13.927	2.513	3.194E-03	.0467	3.8478E-03	.0562	4.2858E-03	.0626	.1000 .450
149	543	92.771	9.845	1.281E-02	.1870	1.5438E-02	.2261	1.7291E-02	.2525	0 .500
150	550	14.467	2.850	3.630E-03	.0530	4.3713E-03	.0639	4.8731E-03	.0712	.1000 .500
151	549	7.044	1.348	1.763E-03	.0257	2.1230E-03	.0310	2.3648E-03	.0345	.2000 .500
152	552	4.504	.795	1.008E-03	.0147	1.2151E-03	.0177	1.3543E-03	.0198	.4000 .500
154	553	2.634	.478	6.093E-04	.0089	7.3469E-04	.0107	8.1899E-04	.0120	.6000 .500
156	552	1.466	.233	2.976E-04	.0043	3.5880E-04	.0052	3.9992E-04	.0058	.8000 .500
157	544	1.346	.243	3.093E-04	.0045	3.7279E-04	.0054	4.1552E-04	.0060	.9000 .500
163	540	88.744	9.113	1.175E-02	.1716	1.4194E-02	.2073	1.5841E-02	.2314	0 .550
164	551	17.315	3.219	4.127E-03	.0603	4.9738E-03	.0726	5.5427E-03	.0810	.1000 .550
165	547	52.530	9.458	1.203E-02	.1874	1.5527E-02	.2268	1.7351E-02	.2534	0 .600
166	554	19.137	3.463	4.436E-03	.0644	5.3505E-03	.0781	5.9659E-03	.0871	.1000 .600
167	545	48.885	8.895	1.155E-02	.1887	1.4969E-02	.2040	1.5805E-02	.2279	0 .650
168	555	17.615	3.479	4.441E-03	.0651	5.3818E-03	.0786	6.0015E-03	.0877	.1000 .650
169	554	44.758	11.838	1.550E-02	.2272	1.8868E-02	.2756	2.1115E-02	.3084	0 .700
170	555	15.144	2.741	3.511E-03	.0513	4.2359E-03	.0619	4.7232E-03	.0690	.1000 .700
171	558	70.908	12.988	1.715E-02	.2505	2.0820E-02	.3041	2.3316E-02	.3405	0 .750
172	562	31.400	5.633	7.161E-03	.1046	8.6561E-03	.1264	9.6654E-03	.1412	.1000 .750
173	563	25.767	4.826	6.250E-03	.0913	7.5567E-03	.1104	8.4389E-03	.1233	.2000 .750
175	556	5.957	1.108	1.422E-03	.0208	1.7164E-03	.0251	1.9143E-03	.0280	.4000 .750
176	552	.739	.142	1.810E-04	.0026	2.1819E-04	.0032	2.4318E-04	.0036	.7000 .750
178	549	1.922	.347	4.415E-04	.0064	5.3181E-04	.0078	5.9243E-04	.0087	.8000 .750
183	573	44.872	6.460	8.477E-03	.1238	1.0278E-02	.1501	1.1499E-02	.1680	0 .900
184	559	10.623	1.927	2.442E-03	.0363	2.9477E-03	.0438	3.3451E-03	.0489	.2000 .900
185	551	4.030	.728	9.289E-04	.0136	1.1195E-03	.0164	1.2476E-03	.0182	.6000 .900
186	568	3.553	.641	8.138E-04	.0119	9.8002E-04	.0143	1.0915E-03	.0159	.8000 .900
									UPPER WING SURFACE
									A/C Y/S
129	552	17.365	2.664	3.403E-03	.0497	4.1031E-03	.0599	4.5732E-03	.0668	.1000 .100
130	549	9.203	1.561	1.996E-03	.0290	2.4029E-03	.0349	2.6657E-03	.0389	.2000 .100
131	548	3.662	.688	8.647E-04	.0127	1.0461E-03	.0153	1.1650E-03	.0170	.4000 .100
132	549	2.064	.395	5.023E-04	.0073	6.0504E-04	.0088	6.7395E-04	.0098	.7000 .100
133	547	1.400	.249	3.107E-04	.0045	3.7410E-04	.0055	4.1661E-04	.0061	.9000 .100
143	549	16.155	3.269	4.159E-03	.0607	5.0097E-03	.0732	5.5806E-03	.0815	.1000 .250
145	551	7.952	1.350	1.722E-03	.0252	2.0755E-03	.0303	2.3130E-03	.0338	.4000 .250
146	549	2.014	.353	4.491E-04	.0066	5.4094E-04	.0079	6.0255E-04	.0088	.9000 .250
154	551	16.692	2.558	3.261E-03	.0476	3.9305E-03	.0574	4.3794E-03	.0640	.1000 .500
159	555	17.864	2.849	3.670E-03	.0540	4.2203E-03	.0620	3.5908E-03	.0524	.2000 .500
160	558	9.528	1.571	2.021E-03	.0295	2.4338E-03	.0356	2.7221E-03	.0398	.4000 .500
161	553	3.558	.624	7.942E-04	.0117	9.6262E-04	.0141	1.0731E-03	.0157	.8000 .500
162	550	5.338	.730	9.294E-04	.0136	1.1197E-03	.0164	1.2475E-03	.0182	.9000 .500
174	544	41.238	7.501	9.732E-03	.1421	1.1771E-02	.1719	1.3149E-02	.1920	.1000 .750
180	560	17.101	3.115	4.017E-03	.0587	4.8530E-03	.0709	5.4164E-03	.0791	.2000 .750
181	565	21.306	2.709	3.516E-03	.0514	4.2527E-03	.0621	4.7506E-03	.0694	.4000 .750
182	551	6.527	1.108	1.414E-03	.0206	1.7034E-03	.0249	1.8988E-03	.0277	.8000 .750
									VERTICAL STABILIZER
									A/C Z/S
187	593	109.603	18.213	2.454E-02	.3584	2.9918E-02	.4370	3.3803E-02	.4908	0 .100
188	559	16.754	2.948	3.797E-03	.0555	4.5857E-03	.0670	5.1171E-03	.0747	.1000 .100
189	546	3.687	.624	8.001E-04	.0117	9.6540E-04	.0141	1.0766E-03	.0157	.4000 .100
191	554	2.361	.453	5.797E-04	.0085	6.9918E-04	.0102	7.7948E-04	.0114	.8000 .100
192	584	74.962	15.575	2.075E-02	.3030	2.5234E-02	.3686	2.8294E-02	.4133	0 .250
193	561	20.992	3.697	4.778E-03	.0698	5.7736E-03	.0843	6.4456E-03	.0941	.1000 .250
194	567	5.155	.878	1.129E-03	.0165	1.3626E-03	.0199	1.5201E-03	.0222	.4000 .250
195	553	2.124	.395	4.918E-04	.0072	5.9294E-04	.0087	6.6094E-04	.0097	.8000 .250
197	567	36.392	6.431	8.495E-03	.1299	1.0767E-02	.1573	1.2034E-02	.1758	.1000 .500
198	559	4.693	.851	1.097E-03	.0160	1.3244E-03	.0193	1.4779E-03	.0216	.4000 .500
200	552	2.363	.427	5.458E-04	.0080	6.5880E-04	.0096	7.3342E-04	.0107	.8000 .500
201	548	118.385	23.219	3.150E-02	.4601	3.8479E-02	.5619	4.3260E-02	.6318	0 .750
202	569	55.909	8.688	8.471E-03	.1237	1.0259E-02	.1498	1.1470E-02	.1675	.1000 .750
203	556	8.186	.943	1.211E-03	.0177	1.4608E-03	.0213	1.6292E-03	.0238	.4000 .750
204	549	4.597	.548	6.973E-04	.0102	8.3998E-04	.0123	9.3566E-04	.0137	.8000 .750

GROUP
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366055

366056

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREMEND	ROLL-MODEL	YAW
48	7	KAM-0B0	8.00	856.0	1346	19.15	2.85	-22.30	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	PREP-PR (IN= .0001")	SIPH (IN= .0001")	SWITCH POSITION
97.5	.0884	3.931	3871	7.594E-05	7.252E-08	3.122E 06	6.831E-02	2.936E-02	1

PC NO	T#	D(MEL)	Q-DOT	H(TO)	H(TO)/HMEP	P(STG)	H(STG)/HMEP	H(STG)/HMEP	H(STG)/HMEP	FUSELAGE X/L	FUSELAGE Y/YMAX
1	625	222.459	41.033	5.776E-02	.8055	7.1015E-02	1.0396	8.022E-02	1.1744	0	0
2	578	191.345	21.888	2.847E-02	.4169	3.4525E-02	.5054	3.902E-02	.5655	.0100	-0
3	568	75.760	12.086	1.581E-02	.2252	1.8566E-02	.2718	2.070E-02	.3031	.0100	-.441
4	565	26.151	3.996	4.991E-03	.0731	5.9991E-03	.0878	6.673E-03	.0977	.0100	-1.000
5	578	5.350	.842	1.044E-03	.0153	1.2574E-03	.0184	1.394E-03	.0204	.0100	0
6	570	41.367	10.035	2.067E-02	.3026	2.5006E-02	.3661	2.793E-02	.4090	.0200	-0
7	565	76.942	14.004	1.774E-02	.2026	2.1679E-02	.3174	2.420E-02	.3543	.0300	-0
8	558	63.910	11.239	1.425E-02	.2086	1.7145E-02	.2516	1.915E-02	.2804	.0300	-.303
9	566	21.317	3.372	4.204E-03	.0616	5.0569E-03	.0740	5.644E-03	.0823	.0300	-1.000
10	578	3.582	.662	7.947E-04	.0116	9.5342E-04	.0140	1.065E-03	.0155	.0300	0
11	559	66.013	12.667	1.609E-02	.2356	1.9414E-02	.2842	2.166E-02	.3169	.0400	-0
12	562	42.034	8.290	1.045E-02	.1529	1.2591E-02	.1842	1.401E-02	.2051	.0500	-0
13	562	41.088	8.101	1.020E-02	.1493	1.2293E-02	.1798	1.367E-02	.2002	.0500	-.310
14	565	21.174	3.697	4.616E-03	.0676	5.564E-03	.0812	6.171E-03	.0903	.0500	-1.000
15	578	3.015	.623	7.710E-04	.0113	9.2514E-04	.0135	1.027E-03	.0150	.0500	0
16	562	39.423	9.967	9.257E-03	.0918	7.5342E-03	.1103	8.390E-03	.1228	.0800	-0
17	569	28.020	9.752	9.465E-03	.0873	7.1770E-03	.1051	7.988E-03	.1170	.0800	-.360
18	564	12.159	2.056	2.566E-03	.0376	3.0814E-03	.0451	3.429E-03	.0502	.0800	-1.000
19	567	14.252	3.349	4.240E-03	.0621	5.089E-03	.0744	5.673E-03	.0831	.1000	-0
20	562	27.435	2.133	2.648E-03	.0388	3.180E-03	.0467	3.550E-03	.0520	.1000	-.383
21	568	23.481	3.851	4.829E-03	.0707	5.809E-03	.0850	6.465E-03	.0947	.1000	-.817
22	564	8.837	1.591	1.985E-03	.0291	2.385E-03	.0349	2.656E-03	.0388	.1000	-1.000
23	561	2.302	.414	5.138E-04	.0075	6.1694E-04	.0090	6.857E-04	.0100	.1000	.783
24	564	4.169	.748	9.921E-04	.0145	1.1922E-03	.0175	1.326E-03	.0194	.1000	0
25	567	18.795	3.400	4.254E-03	.0697	5.1233E-03	.0839	5.699E-03	.0932	.1500	-.893
26	561	8.365	1.660	2.039E-03	.0299	2.4447E-03	.0359	2.722E-03	.0399	.1500	-1.000
27	578	1.270	.262	3.993E-04	.0044	3.5909E-04	.0053	3.994E-04	.0058	.1500	.664
28	563	1.874	1.245	1.550E-03	.0227	1.8626E-03	.0273	2.071E-03	.0303	.1500	0
29	565	14.160	2.550	3.185E-03	.0406	3.826E-03	.0561	4.259E-03	.0624	.2000	-0
30	565	19.042	3.752	4.687E-03	.0686	5.634E-03	.0825	6.267E-03	.0918	.2000	-.278
31	566	22.953	4.763	5.959E-03	.0872	7.165E-03	.1049	7.972E-03	.1167	.2000	-.466
32	564	19.241	3.779	4.714E-03	.0690	5.665E-03	.0829	6.301E-03	.0922	.2000	-.792
33	561	9.568	1.720	2.139E-03	.0313	2.5673E-03	.0376	2.854E-03	.0418	.2000	-1.000
34	578	1.150	.219	2.707E-04	.0040	3.247E-04	.0048	3.607E-04	.0053	.2000	.888
35	563	8.153	1.466	1.825E-03	.0267	2.192E-03	.0321	2.438E-03	.0357	.2000	0
36	569	27.060	4.440	5.573E-03	.0816	6.706E-03	.0982	7.465E-03	.1093	.2100	0
37	569	24.307	4.396	5.501E-03	.0805	6.613E-03	.0969	7.366E-03	.1078	.2200	0
38	569	22.941	3.991	4.507E-03	.0660	5.423E-03	.0794	6.037E-03	.0884	.2300	0
39	561	5.107	1.002	1.264E-03	.0102	1.519E-03	.0219	1.691E-03	.0243	.2400	.486
40	562	7.254	1.146	1.442E-03	.0209	1.732E-03	.0251	1.929E-03	.0279	.2500	0
41	560	1.321	.266	3.300E-04	.0048	3.966E-04	.0058	4.420E-04	.0064	.2700	.465
42	561	2.060	.536	6.655E-04	.0097	7.999E-04	.0117	8.907E-04	.0130	.2700	.465
43	561	2.459	.374	4.650E-04	.0068	5.588E-04	.0082	6.224E-04	.0091	.2700	0
44	568	10.757	1.881	2.350E-03	.0340	2.823E-03	.0410	3.143E-03	.0462	.3000	-0
45	550	16.234	3.020	3.795E-03	.0550	4.561E-03	.0669	5.080E-03	.0744	.3000	-.312
46	550	20.844	4.333	5.441E-03	.0790	6.537E-03	.0958	7.280E-03	.1067	.3000	-.504
47	568	16.990	2.508	3.149E-03	.0460	3.783E-03	.0554	4.210E-03	.0616	.3000	-.857
48	566	10.903	1.846	2.307E-03	.0338	2.771E-03	.0406	3.086E-03	.0452	.3000	-1.000
49	561	3.584	.704	8.743E-04	.0128	1.049E-03	.0154	1.169E-03	.0171	.3000	.983
50	560	1.377	.270	3.350E-04	.0049	4.021E-04	.0059	4.478E-04	.0065	.3000	.853
51	560	.942	.195	2.420E-04	.0035	2.905E-04	.0043	3.235E-04	.0047	.3000	.433
52	561	1.410	.292	3.627E-04	.0053	4.355E-04	.0064	4.849E-04	.0071	.3000	.301
53	560	1.016	.171	2.129E-04	.0031	2.556E-04	.0037	2.846E-04	.0042	.3000	0
54	568	8.451	1.663	2.084E-03	.0305	2.501E-03	.0367	2.784E-03	.0409	.4000	-0
55	569	11.553	2.274	2.854E-03	.0418	3.426E-03	.0503	3.817E-03	.0559	.4000	-.321
56	550	16.829	3.316	4.165E-03	.0610	5.011E-03	.0734	5.579E-03	.0817	.4000	-.526
57	551	24.270	4.253	5.353E-03	.0784	6.424E-03	.0943	7.156E-03	.1051	.4000	-.951
58	568	14.209	2.563	3.211E-03	.0470	3.851E-03	.0565	4.291E-03	.0629	.4000	-1.000
59	563	6.849	1.269	1.581E-03	.0231	1.899E-03	.0278	2.113E-03	.0309	.4000	1.000
60	563	3.289	.592	7.369E-04	.0108	8.847E-04	.0130	9.852E-04	.0144	.4000	.906
61	561	1.879	.394	4.910E-04	.0035	2.893E-04	.0042	3.216E-04	.0047	.4000	.750
62	563	3.059	.644	8.028E-04	.0088	7.242E-04	.0106	8.053E-04	.0118	.4000	0
63	567	13.761	2.484	3.109E-03	.0455	3.733E-03	.0547	4.156E-03	.0609	.4500	-1.000
64	564	8.278	1.267	1.579E-03	.0231	1.895E-03	.0277	2.110E-03	.0309	.4500	1.000
65	563	3.205	.594	7.397E-04	.0108	8.884E-04	.0130	9.881E-04	.0145	.4500	.990
66	550	7.728	1.438	1.806E-03	.0264	2.171E-03	.0318	2.420E-03	.0354	.5000	-0
67	551	10.185	1.951	2.453E-03	.0359	2.945E-03	.0432	3.288E-03	.0481	.5000	-.277
68	551	13.032	2.569	3.233E-03	.0473	3.882E-03	.0570	4.334E-03	.0635	.5000	-.553
69	554	20.933	3.902	4.924E-03	.0721	5.932E-03	.0868	6.608E-03	.0967	.5000	-.830
70	554	20.931	4.784	6.038E-03	.0884	7.274E-03	.1065	8.103E-03	.1186	.5000	-1.000
72	545	5.626	1.136	1.419E-03	.0208	1.706E-03	.0250	1.899E-03	.0278	.5000	1.000
73	543	2.322	.430	5.360E-04	.0078	6.434E-04	.0094	7.160E-04	.0105	.5000	.886
74	542	.767	.141	1.760E-04	.0026	2.114E-04	.0031	2.350E-04	.0034	.5000	.640
75	544	2.723	.490	6.117E-04	.0090	7.351E-04	.0108	8.176E-04	.0120	.5000	0
76	554	8.077	1.329	1.678E-03	.0246	2.021E-03	.0296	2.252E-03	.0330	.5500	-0
77	545	3.247	.519	6.414E-04	.0094	7.704E-04	.0113	8.574E-04	.0126	.5500	-1.000
78	545	4.471	.844	8.539E-04	.0125	1.026E-03	.0150	1.141E-03	.0167	.5500	1.000
79	543	2.275	.422	5.257E-04	.0077	6.316E-04	.0092	7.026E-04	.0103	.5500	.935
80	552	7.813	1.498	1.885E-03	.0276	2.264E-03	.0332	2.517E-03	.0370	.6000	-0
81	552	8.500	1.769	2.229E-03	.0326	2.678E-03	.0393	2.978E-03	.0438	.6000	-.249
83	555	18.034	3.561	4.501E-03	.0659	5.423E-03	.0794	6.042E-03	.0885	.6000	-.748
84	579	-.042	-.008	-1.022E-05	-.0001	-1.223E-05	-.0002	-1.357E-05	-.0002	.6000	-1.000
85	546	2.964	.534	6.674E-04	.0098	8.024E-04	.0117	8.927E-04	.0131	.6000	1.000
86	544	1.446	.276	3.443E-04	.0050	4.137E-04	.0061	4.601E-04	.0067	.6000	.907
87	565	2.722	.475	5.935E-04	.0087	7.134E-04	.0104	7.936E-04	.0116	.6000	0
88	556	6.220	1.125	1.420E-03	.0208	1.711E-03	.0250	1.906E-03	.0279	.6500	-0
89	553	6.250	1.172	1.479E-03	.0217	1.781E-03	.0261	1.984E-03	.0291	.7000	-0
90	553	6.773	1.336	1.686E-03	.0247	2.030E-03	.0297	2.261E-03	.0331	.7000	-.235
91	553	8.564	1.690	2.131E-03	.0312	2.567E-03	.0376	2.859E-03	.0419	.7000	-.469
92	557	11.162	2.088	2.645E-03	.0387	3.189E-03	.0467	3.554E-03	.0520	.7000	-.704
93	555	11.857	2.407	3.044E-03	.0446	3.668E-03	.0537	4.088E-03	.0598	.7000	-.848
94	547	3.630	.793	9.926E-04	.0145	1.195E-03	.0175	1.328E-03	.0194	.7000	1.000
95	544	2.164	.390	4.868E-04	.0071	5.850E-04	.0086	6.506E-04	.0095	.7000	.908
96	544	2.099	.378	4.714E-04	.0069	5.664E-04	.0083	6.308E-04	.0092	.7000	0
97	553	5.694	1.061	1.339E-03	.0196	1.612E-03	.0236	1.796E-03	.0263	.7500	-0
98	554	7.502	1.316	1.663E-03	.0243	2.003E-03	.0293	2.231E-03	.0327	.8000	-0

GROUP
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AEDC(AMD)(INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
V11102

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
48	7	KAM-0A0	4.00	861.0	1344	19.48	2.92	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	PREF-FN (RE .009FT)	SIEH (RE .009FT)	SWITCH POSITION
97.4	.0HP	3.951	3H69	7.5968E-05	7.0438E-0H	3.75E 06	6.8478E-02	2.9278E-02	2

TC NO	TW	DI-WALL	Q-WALL	H(TW)	H(TW)/HREF	H(STAG)	H(STAG)/HREF	H(RSTAG)	H(RSTAG)/HREF

FUSELAGE

A/L	Y/YMAX
99	554	6.940H	1.326	1.611E-03	.0245	2.020HE-03	.0245	2.2915E-03	.0329	.8000	-.223
100	554	7.36H	1.414	1.78HE-03	.0260	2.1942E-03	.0315	2.4026E-03	.0351	.8000	-.446
101	55H	H.31H	1.716	2.20HE-03	.0322	2.68HE-03	.0389	2.96HE-03	.0433	.8000	-.669
102	559	H.24H	1.722	2.19JE-03	.0320	2.6845E-03	.0386	2.9505E-03	.0411	.8000	-.806
103	556	5.073	1.091	1.26JE-03	.0185	1.5261E-03	.0223	1.7003E-03	.0248	.8000	-0
104	553	4.040	.741	9.239E-04	.0135	1.1130E-03	.0163	1.2400E-03	.0181	.9000	-0
105	551	4.817	.940	1.211E-03	.0177	1.45HHE-03	.0211	1.6644E-03	.0237	.9000	-.226
106	550	5.659	1.114	1.40JE-03	.0205	1.68955E-03	.0247	1.8813E-03	.0275	.9000	-.452
107	556	6.90H	1.250	1.58JE-03	.0231	1.9052E-03	.0278	2.1227E-03	.0310	.9000	-.678
108	554	5.254	.940	1.240E-03	.0181	1.4946E-03	.0218	1.6656E-03	.0243	.9000	-.817
109	548	.940	.190	2.HHJE-04	.0035	2.8700E-04	.0042	3.1942E-04	.0047	.9000	1.000
110	543	1.240	.223	2.78JE-04	.0041	3.3425E-04	.0049	3.7170E-04	.0054	.9000	.884
111	542	.656	.107	1.334E-04	.0019	1.6027E-04	.0023	1.7819E-04	.0026	.9000	.610
112	553	4.63H	.890	1.124E-03	.0164	1.3542E-03	.0199	1.5088E-03	.0220	.9500	-0
114	550	7.40H	1.418	1.78JE-03	.0261	2.1494E-03	.0314	2.3932E-03	.0350	.9900	-0
115	552	5.H56	1.158	1.458E-03	.0213	1.7546E-03	.0257	1.9578E-03	.0286	.9900	-.253
116	552	6.1E0	1.219	1.53JE-03	.0225	1.8518E-03	.0270	2.0625E-03	.0301	.9900	-.507
117	552	6.08H	1.201	1.514E-03	.0221	1.8217E-03	.0266	2.0311E-03	.0297	.9900	-.660
118	552	5.94J	1.071	1.353E-03	.0198	1.6294E-03	.0238	1.8150E-03	.0265	.9900	-.793
119	541	.HE3	.165	2.10JE-04	.0031	2.52HHE-04	.0037	2.8113E-04	.0041	.9900	.780
120	540	1.207	.137	1.70HE-04	.0025	2.0512E-04	.0030	2.2800E-04	.0033	.9900	.305

LOWER WING SURFACE

A/C	Y/S
121	57H	51.970	10.095	1.31JE-02	.1923	1.5970E-02	.2332	1.7870E-02	.2610	0	.050
122	547	44.516	11.147	1.47JE-02	.2149	1.7H95E-02	.2612	2.0046E-02	.2928	0	.100
124	56H	15.7E0	2.886	3.649E-03	.0539	4.461JE-03	.0652	4.9830E-03	.0728	.2000	.100
126	557	6.73H	1.147	1.456E-03	.0213	1.7543E-03	.0257	1.9578E-03	.0286	.6000	.100
127	556	6.214	1.125	1.427E-03	.0210	1.7207E-03	.0251	1.9177E-03	.0280	.7000	.100
128	553	8.771	1.202	1.519E-03	.0222	1.8303E-03	.0267	2.0341E-03	.0298	.9000	.100
134	545	73.134	15.065	1.90HE-02	.2898	2.4112E-02	.3522	2.7018E-02	.3946	0	.150
135	540	79.825	12.945	1.649E-02	.2481	2.0613E-02	.3010	2.3075E-02	.3370	0	.250
136	569	28.9E2	5.243	6.810E-03	.0995	8.2376E-03	.1203	9.2019E-03	.1344	.1000	.250
137	566	18.0E3	3.090	3.971E-03	.0580	4.7998E-03	.0701	5.3595E-03	.0783	.2000	.250
138	564	12.63E	2.366	3.031E-03	.0443	3.6822E-03	.0535	4.0874E-03	.0597	.4000	.250
140	562	11.0E3	1.953	2.497E-03	.0365	3.0153E-03	.0440	3.3644E-03	.0491	.6000	.250
142	565	12.0E7	2.048	2.644E-03	.0386	3.1867E-03	.0465	3.5510E-03	.0519	.9000	.250
147	560	62.H24	11.H67	1.563E-02	.2284	1.8841E-02	.2752	2.1092E-02	.3080	0	.450
148	571	34.675	6.330	8.187E-03	.1196	9.9100E-03	.1447	1.1078E-02	.1618	.1000	.450
149	560	60.335	11.603	1.491E-02	.2178	1.8092E-02	.2642	2.0251E-02	.2958	0	.500
150	570	33.007	6.647	8.633E-03	.1261	1.0445E-02	.1526	1.1671E-02	.1705	.1000	.500
151	567	18.H80	3.751	4.H26E-03	.0705	5.0327E-03	.0H52	5.6134E-03	.0951	.2000	.500
152	569	16.266	2.H76	3.711E-03	.0542	4.4H94E-03	.0654	5.0150E-03	.0732	.4000	.500
154	566	19.319	3.513	4.500E-03	.0657	5.436ZE-03	.0794	6.0822E-03	.0H86	.6000	.500
156	560	20.557	3.7H5	4.180E-03	.0811	5.0520E-03	.0738	5.6345E-03	.0H23	.8000	.500
157	554	18.569	3.389	4.25EE-03	.0622	5.12HIE-03	.0749	5.7136E-03	.0834	.9000	.500
163	576	61.41H	11.576	1.506E-02	.2199	1.8251E-02	.2666	2.0415E-02	.2982	0	.550
164	573	40.903	7.791	9.H86E-03	.1459	1.2095E-02	.1766	1.3523E-02	.1975	.1000	.550
165	579	59.847	11.299	1.476E-02	.2156	1.7910E-02	.2616	2.0046E-02	.2928	0	.600
166	575	42.77H	7.H24	1.017E-02	.1485	1.2323E-02	.1H00	1.3782E-02	.2013	.1000	.600
167	577	58.9H6	10.791	1.407E-02	.2054	1.7059E-02	.2491	1.9081E-02	.2787	0	.650
168	572	42.451	8.456	1.094E-02	.1598	1.3248E-02	.1935	1.4808E-02	.2163	.1000	.650
169	578	63.954	11.714	1.529E-02	.2233	1.8540E-02	.2708	2.0747E-02	.3030	0	.700
170	581	19.071	3.464	4.422E-03	.0646	5.3346E-03	.0780	5.9556E-03	.0H70	.1000	.700
171	581	87.954	12.464	1.633E-02	.2385	1.9819E-02	.2899	2.2191E-02	.3241	0	.750
172	573	44.3E0	8.747	1.133E-02	.1655	1.3725E-02	.2005	1.5344E-02	.2241	.1000	.750
173	567	22.982	4.313	5.547E-03	.0810	6.7064E-03	.0979	7.4892E-03	.1094	.2000	.750
175	563	14.231	2.901	3.713E-03	.0542	4.4H4VE-03	.0655	5.0050E-03	.0731	.4000	.750
176	556	3.417	.656	8.323E-04	.0122	1.0033E-03	.0147	1.1182E-03	.0163	.7000	.750
178	554	7.092	1.2H3	1.623E-03	.0237	1.955HE-03	.0286	2.1790E-03	.0318	.8000	.750
183	567	34.615	4.967	6.3H6E-03	.0933	7.719VE-03	.1127	8.6205E-03	.1259	0	.900
184	564	23.9EH	4.261	5.459E-03	.0797	6.5945E-03	.0963	7.3602E-03	.1075	.2000	.900
185	55H	19.474	2.625	3.338E-03	.0487	4.0261E-03	.0588	4.4890E-03	.0656	.6000	.900
186	562	11.621	2.101	2.653E-03	.0388	3.1958E-03	.0467	3.5598E-03	.0520	.8000	.900

UPPER WING SURFACE

A/C	Y/S
129	554	3.071	.472	5.971E-04	.0087	7.1995E-04	.0105	8.0178E-04	.0117	.1000	.100
130	552	.872	.148	1.H8HE-04	.0027	2.2503E-04	.0033	2.5064E-04	.0037	.2000	.100
131	551	.95H	.178	2.248E-04	.0033	2.7072E-04	.0040	3.0147E-04	.0044	.4000	.100
132	549	.84H	.162	2.041E-04	.0030	2.4561E-04	.0036	2.7342E-04	.0040	.7000	.100
133	546	.92H	.092	1.156E-04	.0017	1.3900E-04	.0020	1.5466E-04	.0023	.9000	.100
143	553	5.143	1.043	1.318E-03	.0193	1.5882E-03	.0232	1.7693E-03	.0258	.1000	.250
145	550	.0EH	.113	1.42HE-04	.0021	1.7184E-04	.0025	1.913JE-04	.0028	.4000	.250
146	547	.951	.096	1.208E-04	.0018	1.4531E-04	.0021	1.6171E-04	.0024	.9000	.250
158	552	5.099	.782	9.H79E-04	.0144	1.1899E-03	.0174	1.3254E-03	.0194	.1000	.500
159	552	3.790	.623	7.H86E-04	.0115	9.47A5E-04	.0138	1.0554E-03	.0154	.2000	.500
160	553	2.41H	.397	5.019E-04	.0073	6.046VE-04	.00HH	6.7366E-04	.0098	.4000	.500
161	550	.436	.076	9.498E-05	.0014	1.1554E-04	.0017	1.2864E-04	.0019	.8000	.500
162	546	.995	.136	1.701E-04	.0025	2.049JE-04	.0030	2.2756E-04	.0033	.9000	.500
179	556	14.23H	2.579	3.272E-03	.0478	3.9444E-03	.0576	4.3964E-03	.0642	.1000	.750
180	552	4.962	.897	1.132E-03	.0165	1.3640E-03	.0199	1.5192E-03	.0222	.2000	.750
181	542	2.7E4	.348	4.396E-04	.0064	5.2940E-04	.0077	5.8965E-04	.0086	.4000	.750
182	546	1.157	.198	2.454E-04	.0036	2.9513E-04	.0043	3.2840E-04	.0048	.8000	.750

VERTICAL STABILIZER

A/C	Z/S
187	549	19.330	1.695	2.132E-03	.0311	2.5063E-03	.0375	2.H57VE-03	.0417	0	.100
188	541	2.9E1	.515	6.440E-04	.0094	7.75H0E-04	.0113	H.62H2E-04	.0126	.1000	.100
189	540	.870	.147	1.H26E-04	.0027	2.1924E-04	.0032	2.436VE-04	.0036	.4000	.100
191	539	.H36	.083	1.031E-04	.0015	1.2379E-04	.0019	1.3756E-04	.0020	.8000	.100
192	550	10.962	2.105	2.651E-03	.0387	3.1912E-03	.0466	3.5532E-03	.0519	0	.250
193	542	4.961	.870	1.044E-03	.0158	1.3026E-03	.0190	1.4481E-03	.0212	.1000	.250
194	540	.941	.159	1.974E-04	.0029	2.3700E-04	.0035	2.6344E-04	.0038	.4000	.250
195	539	.H40	.151	1.H73E-04	.0027	2.24H8E-04	.0033	2.4988E-04	.0036	.8000	.250
197	548	13.8E4	2.5H0	3.240E-03	.0473	3.8975E-03	.0569	4.3340E-03	.0634	.1000	.500
198	543	1.807	.2H9	3.607E-04	.0053	4.3345E-04	.0063	4.8204E-04	.0070	.4000	.500
200	540	1.082	.194	2.413E-04	.0035	2.8975E-04	.0042	3.2204E-04	.0047	.8000	.500
201	565	51.761	9.998	1.241E-02	.1871	1.5481E-02	.2261	1.7281E-02	.2524	0	.750
202	560	30.3E6	5.H45	7.391E-03	.0441	5.6857E-03	.0772	6.8850E-03	.0860	.1000	.750
203	544	5.445	.624	7.799E-04	.0114	9.3734E-04	.0137	1.0426E-03	.0152	.4000	.750
204	539	3.2E0	.393	4.876E-04	.0071	5.8540E-04	.0085	6.5061E-04	.0095	.8000	.750

GROUP
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366064

ARO,(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREHEAD	ROLL-MODEL	YAW
49	7	RAM-UBU	8.00	855.2	1343	9.47	12.53	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RHEF-FH (RE .009FT)	SIPH (RE .009FT)	SWITCH POSITION
97.3	.098R	3.924	3867	7.9521E-05	7.2516E-08	3.713E 06	8.823E-02	2.235E-02	1

TC NO	TH	DTHOT	Q-HOT	M(TO)	M(TO)/MREF	P(.9TO)	M(.9TO)/MREF	M(.85TO)	M(.85TO)/MREF	FUSELAGE A/L	FUSELAGE Y/YMAX
1	634	225.141	42.298	5.969E-02	.0742	7.3587E-02	1.0785	8.3323E-02	1.2212	0	0
2	576	104.105	17.318	4.256E-02	.5307	4.7348E-02	.6908	3.0593E-02	.4484	.0100	-0
3	563	49.617	7.926	1.016E-02	.1469	1.2271E-02	.1799	1.3695E-02	.2007	.0100	-.441
4	554	24.241	3.721	4.711E-03	.0691	5.6768E-03	.0832	6.3250E-03	.0927	.0100	-1.000
5	550	13.490	2.142	2.702E-03	.0396	3.2539E-03	.0477	3.6232E-03	.0531	.0100	0
6	548	85.867	11.239	1.450E-02	.2125	1.7535E-02	.2570	1.9588E-02	.2871	.0200	-0
7	543	40.024	5.098	1.166E-02	.1709	1.4090E-02	.2065	1.5726E-02	.2305	.0300	-0
8	550	40.074	7.054	9.010E-03	.1321	1.0876E-02	.1594	1.2133E-02	.1778	.0300	-.303
9	543	20.940	3.328	4.711E-03	.0617	5.6725E-03	.0743	5.6509E-03	.0828	.0300	-1.000
10	550	9.849	1.777	2.240E-03	.0328	2.6961E-03	.0395	3.0019E-03	.0440	.0300	0
11	541	39.662	7.457	1.004F-02	.1472	1.2124E-02	.1777	1.3525E-02	.1982	.0400	-0
12	546	25.311	5.002	6.354E-03	.0931	7.6618E-03	.1123	8.5405E-03	.1252	.0500	-0
13	546	24.629	4.868	6.182E-03	.0906	7.4534E-03	.1092	8.3080E-03	.1218	.0500	-.310
14	543	17.498	3.069	3.884E-03	.0569	4.6771E-03	.0686	5.2124E-03	.0764	.0500	-1.000
15	550	8.183	1.698	2.140E-03	.0314	2.5762E-03	.0378	2.8685E-03	.0420	.0500	0
16	546	19.535	2.466	3.132E-03	.0459	3.7740E-03	.0553	4.2048E-03	.0617	.0800	-0
17	557	16.219	2.762	3.514E-03	.0515	4.2385E-03	.0621	4.7256E-03	.0693	.0800	-.380
18	554	11.748	1.912	2.423F-03	.0355	2.9195E-03	.0428	3.2532E-03	.0477	.0800	-1.000
19	554	8.517	1.548	2.010E-03	.0295	2.4224E-03	.0355	2.6990E-03	.0396	.1000	-0
20	557	12.417	.955	1.215F-03	.0178	1.4644E-03	.0215	1.6331E-03	.0239	.1000	-.383
21	547	11.115	1.831	2.178F-03	.0341	2.8071E-03	.0411	3.1293E-03	.0459	.1000	-.817
22	554	7.053	1.283	1.625F-03	.0238	1.9585E-03	.0287	2.1822E-03	.0320	.1000	-1.000
23	550	3.971	.717	9.047E-04	.0133	1.0892E-03	.0160	1.2129E-03	.0178	.1000	.783
24	550	3.061	.587	7.395F-04	.0108	8.9018E-04	.0130	9.9120E-04	.0145	.1000	0
25	554	10.369	2.109	2.673F-03	.0392	3.2216E-03	.0472	3.5894E-03	.0526	.1500	-.893
26	550	8.004	1.578	1.987F-03	.0291	2.3922E-03	.0351	2.6637E-03	.0390	.1500	-1.000
27	546	2.919	.558	6.991F-04	.0102	8.4064E-04	.0123	9.3535E-04	.0137	.1500	.664
28	546	1.588	.251	3.152F-04	.0046	3.7905E-04	.0056	4.2176E-04	.0062	.1500	0
29	550	5.262	.943	1.148F-03	.0174	1.4296E-03	.0210	1.5917E-03	.0233	.2000	-0
30	551	9.439	1.663	2.098E-03	.0307	2.5256E-03	.0370	2.8125E-03	.0412	.2000	-.278
31	552	10.265	2.128	2.688F-03	.0394	3.2387E-03	.0475	3.6074E-03	.0529	.2000	-.466
32	551	10.940	2.156	2.723F-03	.0399	3.2787E-03	.0481	3.6516E-03	.0535	.2000	-.742
33	549	9.089	1.641	2.068F-03	.0303	2.4886E-03	.0364	2.7687E-03	.0406	.2000	-1.000
34	543	3.333	.636	7.952F-04	.0117	9.5570E-04	.0140	1.0630E-03	.0156	.2000	.888
35	546	8.806	1.587	1.990F-03	.0292	2.3929E-03	.0351	2.6626E-03	.0390	.2000	0
36	547	11.473	1.880	2.362F-03	.0346	2.8418E-03	.0417	3.1629E-03	.0464	.2100	0
37	540	31.442	5.790	7.281F-03	.1067	8.7877E-03	.1288	9.8015E-03	.1437	.2200	0
38	574	83.761	13.448	1.748E-02	.2562	2.1178E-02	.3104	2.3608E-02	.3471	.2300	0
39	548	19.345	3.805	4.743E-03	.0701	5.7544E-03	.0843	6.4049E-03	.0939	.2400	.486
40	548	14.349	2.274	2.858F-03	.0419	3.4387E-03	.0504	3.8274E-03	.0561	.2500	0
41	546	7.977	1.611	2.021F-03	.0296	2.4302E-03	.0356	2.7041E-03	.0396	.2700	.465
42	545	7.263	1.467	1.837F-03	.0269	2.2090E-03	.0324	2.4576E-03	.0360	.2700	.465
43	543	4.402	.733	9.163F-04	.0134	1.1012E-03	.0161	1.2246E-03	.0180	.2700	0
44	555	3.467	.612	7.744F-04	.0114	9.3543E-04	.0137	1.0429E-03	.0153	.3000	-0
45	556	8.851	1.241	1.575E-03	.0231	1.8940E-03	.0278	2.1165E-03	.0310	.3000	-.312
46	557	10.311	2.152	2.736E-03	.0401	3.2996E-03	.0484	3.6784E-03	.0539	.3000	-.504
47	557	12.195	1.898	2.298E-03	.0337	2.7714E-03	.0406	3.0895E-03	.0453	.3000	-.857
48	554	9.475	1.611	2.042E-03	.0299	2.4616E-03	.0361	2.7431E-03	.0402	.3000	-1.000
49	547	5.622	1.106	1.348E-03	.0203	1.6698E-03	.0245	1.8583E-03	.0272	.3000	.983
50	545	2.030	.399	4.996E-04	.0073	6.0047E-04	.0088	6.6827E-04	.0098	.3000	.853
51	546	7.331	1.521	1.908E-03	.0280	2.2944E-03	.0336	2.5531E-03	.0374	.3000	.433
52	545	5.673	1.177	1.474F-03	.0216	1.7723E-03	.0260	1.9718E-03	.0289	.3000	.361
53	542	1.521	.257	3.206E-04	.0047	3.8519E-04	.0056	4.2832E-04	.0063	.3000	0
54	557	2.319	.459	5.834F-04	.0086	7.0365E-04	.0103	7.8350E-04	.0115	.4000	-0
55	557	5.628	1.114	1.417F-03	.0208	1.7043E-03	.0250	1.9043E-03	.0279	.4000	-.321
56	557	9.085	1.878	2.387E-03	.0350	2.8705E-03	.0422	3.2094E-03	.0470	.4000	-.526
57	559	19.781	3.479	4.434E-03	.0650	5.3447E-03	.0784	5.9658E-03	.0874	.4000	-.951
58	557	13.821	2.504	3.183F-03	.0467	3.8383E-03	.0563	4.2784E-03	.0627	.4000	-1.000
59	552	6.799	1.304	1.644F-03	.0242	1.9858E-03	.0291	2.2121E-03	.0324	.4000	1.000
60	545	5.440	.985	1.238F-03	.0181	1.4886E-03	.0218	1.6561E-03	.0243	.4000	.906
61	543	3.379	.608	7.603F-04	.0111	9.1371E-04	.0134	1.0163E-03	.0149	.4000	.750
62	543	3.494	.552	6.900F-04	.0101	8.2915E-04	.0122	9.2213E-04	.0135	.4000	0
63	556	13.960	2.525	3.207E-03	.0470	3.8670E-03	.0567	4.3103E-03	.0632	.4500	-1.000
64	551	8.527	1.322	1.670F-03	.0245	2.0108E-03	.0295	2.2395E-03	.0328	.4500	1.000
65	543	5.350	.993	1.241F-03	.0182	1.4914E-03	.0219	1.6598E-03	.0243	.4500	.990
66	559	2.113	.395	5.033F-04	.0074	6.0729E-04	.0089	6.7723E-04	.0099	.5000	-0
67	557	4.784	.921	1.171E-03	.0172	1.4129E-03	.0207	1.5793E-03	.0231	.5000	-.277
68	557	7.674	1.518	1.931F-03	.0283	2.3295E-03	.0341	2.5973E-03	.0381	.5000	-.553
69	560	13.960	2.610	3.331F-03	.0488	4.0198E-03	.0589	4.4836E-03	.0657	.5000	-.830
70	562	22.634	4.361	5.579F-03	.0818	6.7361E-03	.0987	7.5159E-03	.1102	.5000	-1.000
71	554	8.567	1.327	1.681F-03	.0246	2.0291E-03	.0297	2.2564E-03	.0331	.5000	1.000
72	545	4.244	.787	9.864E-04	.0145	1.1859E-03	.0174	1.3194E-03	.0193	.5000	.886
73	544	2.671	.481	6.011F-04	.0088	7.2245E-04	.0106	8.0358E-04	.0118	.5000	.640
74	545	8.251	1.487	1.865E-03	.0273	2.2539E-03	.0329	2.4920E-03	.0365	.5000	0
75	562	2.329	.385	4.921E-04	.0072	5.9424E-04	.0087	6.6304E-04	.0097	.5500	-0
76	556	3.620	.576	7.324F-04	.0107	8.8310E-04	.0129	9.8442E-04	.0144	.5500	-1.000
77	555	4.726	.726	9.213E-04	.0135	1.1106E-03	.0163	1.2378E-03	.0181	.5500	1.000
78	549	3.361	.625	7.867F-04	.0115	9.4877E-04	.0139	1.0540E-03	.0154	.5500	.945
79	549	3.161	.601	7.682E-04	.0113	9.2737E-04	.0136	1.0346E-03	.0152	.6000	-0
80	561	3.950	.826	1.056E-03	.0155	1.2752E-03	.0187	1.4227E-03	.0209	.6000	-.249
81	545	9.839	1.953	2.508F-03	.0368	3.0305E-03	.0444	3.3832E-03	.0496	.6000	-.748
82	531	.442	.089	1.091E-04	.0016	1.3046E-04	.0019	1.4503E-04	.0021	.6000	-1.000
83	557	2.372	.430	5.466F-04	.0080	6.5927E-04	.0097	7.3499E-04	.0108	.6000	1.000
84	549	1.904	.364	4.591E-04	.0067	5.5267E-04	.0081	6.1534E-04	.0090	.6000	.907
85	545	4.891	.859	1.069E-03	.0157	1.2899E-03	.0189	1.4249E-03	.0210	.6000	0
86	544	4.167	.860	1.103E-03	.0162	1.3330E-03	.0195	1.4888E-03	.0218	.6500	-0
87	560	7.071	1.322	1.688E-03	.0247	2.0375E-03	.0299	2.2727E-03	.0333	.7000	-0
88	560	4.348	.851	1.099E-03	.0161	1.3260E-03	.0194	1.4790E-03	.0217	.7000	-.235
89	560	5.145	1.015	1.298E-03	.0190	1.5644E-03	.0229	1.7450E-03	.0256	.7000	-.469
90	564	6.004	1.125	1.444E-03	.0212	1.7453E-03	.0256	1.9442E-03	.0286	.7000	-.704
91	565	5.958	1.215	1.561E-03	.0229	1.8858E-03	.0276	2.1052E-03	.0309	.7000	-.848
92	561	2.226	.490	6.261E-04	.0092	7.5597E-04	.0111	8.4344E-04	.0124	.7000	1.000
93	550	1.987	.359	4.520E-04	.0066	5.4610E-04	.0080	6.0982E-04	.0089	.7000	.908
94	544	4.453	.802	1.003E-03	.0147	1.2059E-03	.0177	1.3415E-03	.0197	.7000	0
95	560	10.161	1.900	2.425F-03	.0355	2.9268E-03	.0429	3.2646E-03	.0478	.7500	-0
96	558	12.459	2.191	2.790E-03	.0409	3.3658E-03	.0493	3.7531E-03	.0550	.8000	-0

GROUP
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ARO(ARNOLD ENG.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
V11162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
49	7	KAH-040	4.00	856.3	1342	9.52	12.48	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	RREF-FEM (MM .009FT)	SIFR (MM .009FT)	SWITCH POSITION
97.2	.0888	3.930	3865	7.5698E-05	7.1678E-08	3.74E 06	6.826E-02	2.931E-02	2

TC NO	IW	DINCI	Q-INC	H(I0)	H(I0)/HREF	H(.9I0)	H(.9I0)/HREF	H(.85I0)	H(.85I0)/HREF

FUSELAGE

A/L	Y/YMAX
.0000	-.223
.0000	-.446
.0000	-.669
.0000	-.806
.0500	-0
.0000	-0
.0000	-.226
.0000	-.452
.0000	-.678
.0000	-.817
.0000	1.000
.0000	.884
.0000	.610
.0500	-0
.0000	-0
.0000	-.253
.0000	-.506
.0000	-.760
.0000	.780
.0000	.305

99	552	7.490	1.478	1.811E-03	.0206	2.189E-03	.0121	2.439E-03	.0357
100	551	5.331	1.022	1.293E-03	.0189	1.557E-03	.0229	1.734E-03	.0254
101	554	4.431	.923	1.171E-03	.0172	1.411E-03	.0207	1.572E-03	.0230
102	555	3.771	.787	1.000E-03	.0147	1.205E-03	.0177	1.344E-03	.0197
103	556	3.270	1.772	2.249E-03	.0329	2.710E-03	.0397	3.020E-03	.0442
104	552	7.439	1.703	2.156E-03	.0316	2.597E-03	.0381	2.893E-03	.0424
105	551	6.322	1.448	1.832E-03	.0268	2.207E-03	.0324	2.459E-03	.0360
106	557	3.748	.738	9.301E-04	.0136	1.120ZE-03	.0164	1.247E-03	.0183
107	550	3.189	.575	7.251E-04	.0106	8.735E-04	.0128	9.735E-04	.0143
108	550	2.962	.470	6.031E-04	.0088	7.266E-04	.0107	8.095E-04	.0117
109	549	1.374	.278	3.504E-04	.0051	4.221E-04	.0062	4.703E-04	.0069
110	544	.957	.177	2.229E-04	.0032	2.685E-04	.0039	2.991E-04	.0044
111	544	.734	.153	1.914E-04	.0028	2.305E-04	.0034	2.569E-04	.0037
112	552	6.249	1.295	1.649E-03	.0241	1.914E-03	.0280	2.133E-03	.0312
113	550	6.417	1.229	1.562E-03	.0227	1.813E-03	.0264	2.021E-03	.0295
114	550	7.105	1.490	1.789E-03	.0259	2.077E-03	.0302	2.315E-03	.0338
115	550	6.384	1.241	1.567E-03	.0230	1.820E-03	.0266	2.028E-03	.0296
116	549	6.384	1.241	1.567E-03	.0230	1.820E-03	.0266	2.028E-03	.0296
117	550	4.259	.847	1.069E-03	.0157	1.241E-03	.0181	1.383E-03	.0202
118	549	3.169	.568	7.165E-04	.0105	8.321E-04	.0122	9.271E-04	.0135
119	543	.585	.115	1.430E-04	.0021	1.726ZE-04	.0025	1.923E-04	.0028
120	543	3.945	.451	5.650E-04	.0083	6.784YE-04	.0099	7.551E-04	.0111

LOWER WING SURFACE

A/C	Y/S
0	.050
0	.100
.2000	.100
.6000	.100
.7000	.100
.9000	.100
0	.150
0	.250
.1000	.250
.2000	.250
.4000	.250
.6000	.250
.9000	.250
0	.450
.1000	.450
0	.500
.1000	.500
.2000	.500
.4000	.500
.6000	.500
.8000	.500
.9000	.500
0	.550
.1000	.550
0	.600
.1000	.600
0	.650
.1000	.650
0	.700
.1000	.700
0	.750
.1000	.750
.2000	.750
.4000	.750
.7000	.750
.8000	.750
0	.900
.2000	.900
.6000	.900
.8000	.900

121	580	44.624	13.531	1.777E-02	.2903	2.156ZE-02	.3149	2.414YE-02	.3538
122	583	47.668	11.663	1.533E-02	.2503	1.858ZE-02	.2718	2.081YE-02	.3067
124	560	4.060	1.045	2.104E-03	.0308	2.560ZE-03	.0372	2.868YE-03	.0415
126	552	4.181	.710	8.994E-04	.0132	1.094YE-03	.0159	1.207ZE-03	.0177
127	550	4.987	.849	1.134E-03	.0166	1.380ZE-03	.0200	1.520ZE-03	.0223
128	546	4.796	.654	8.222E-04	.0120	9.998YE-04	.0145	1.100ZE-03	.0161
130	586	42.054	16.918	2.260E-02	.3281	2.723YE-02	.3990	3.053ZE-02	.4473
135	571	52.574	9.595	1.245E-02	.1824	1.507ZE-02	.2208	1.684ZE-02	.2468
136	558	17.560	3.189	4.069E-03	.0596	4.909YE-03	.0719	5.475ZE-03	.0802
137	557	11.093	1.888	2.405E-03	.0352	2.901ZE-03	.0425	3.234YE-03	.0474
138	556	8.185	1.527	1.944E-03	.0285	2.344ZE-03	.0343	2.613YE-03	.0383
140	555	6.815	1.196	1.520E-03	.0223	1.831YE-03	.0268	2.041ZE-03	.0299
142	547	5.215	.865	1.098E-03	.0159	1.309YE-03	.0192	1.457ZE-03	.0214
147	576	60.497	11.404	1.449E-02	.2102	1.805YE-02	.2645	2.020ZE-02	.2960
148	559	21.830	3.961	5.050E-03	.0741	6.106YE-03	.0895	6.811ZE-03	.0998
149	574	57.569	10.837	1.411E-02	.2067	1.709YE-02	.2505	1.912ZE-02	.2801
150	558	21.987	4.349	5.549E-03	.0813	6.695ZE-03	.0981	7.460ZE-03	.1094
151	557	12.421	2.445	3.120E-03	.0458	3.777YE-03	.0553	4.206ZE-03	.0616
152	561	10.154	2.051	2.650E-03	.0335	3.206YE-03	.0644	4.916ZE-03	.0720
154	557	17.351	2.238	2.852E-03	.0418	3.440ZE-03	.0504	3.835ZE-03	.0562
156	552	7.480	1.255	1.591E-03	.0233	1.916YE-03	.0281	2.135ZE-03	.0313
157	547	5.807	1.047	1.317E-03	.0193	1.587YE-03	.0232	1.769YE-03	.0259
163	565	54.919	10.298	1.327E-02	.1943	1.603YE-02	.2349	1.790BE-02	.2623
164	560	27.314	5.109	6.537E-03	.0958	7.891ZE-03	.1156	8.803ZE-03	.1290
165	574	58.341	10.989	1.412E-02	.2069	1.735YE-02	.2543	1.941ZE-02	.2844
166	560	30.470	5.532	7.080E-03	.1037	8.544YE-03	.1252	9.537ZE-03	.1397
167	569	57.532	10.490	1.358E-02	.1989	1.643ZE-02	.2407	1.836BE-02	.2690
168	561	11.002	2.142	2.771E-03	.0406	3.504YE-03	.0513	3.860BE-03	.0566
169	574	61.454	12.346	1.614E-02	.2364	1.955YE-02	.2865	2.187BE-02	.3205
170	565	15.460	2.868	3.645E-03	.0534	4.394YE-03	.0644	4.898BE-03	.0718
171	576	72.457	13.261	1.733E-02	.2539	2.101YE-02	.3079	2.351BE-02	.3445
172	564	39.624	6.935	8.917E-03	.1306	1.077YE-02	.1579	1.202YE-02	.1762
173	560	21.273	3.979	5.093E-03	.0746	6.149ZE-03	.0901	6.860ZE-03	.1005
175	555	8.067	1.644	2.084E-03	.0306	2.519YE-03	.0369	2.807ZE-03	.0411
176	551	1.619	.310	3.923E-04	.0057	4.744YE-04	.0069	5.261YE-04	.0077
178	547	3.048	.569	8.907E-04	.0101	8.309YE-04	.0122	9.249BE-04	.0135
183	563	36.132	6.885	8.278E-03	.0920	1.058ZE-03	.1111	8.466BE-03	.1240
184	557	17.184	3.115	3.969E-03	.0581	4.787YE-03	.0701	5.337BE-03	.0782
185	549	7.570	1.368	1.725E-03	.0253	2.078ZE-03	.0304	2.311BE-03	.0339
186	545	6.439	1.159	1.455E-03	.0213	1.749YE-03	.0256	1.947ZE-03	.0285

UPPER WING SURFACE

A/C	Y/S
.1000	.100
.2000	.100
.4000	.100
.7000	.100
.9000	.100
.1000	.250
.4000	.250
.6000	.250
.9000	.250
.1000	.500
.2000	.500
.4000	.500
.7000	.500
.8000	.500
.1000	.700
.2000	.750
.4000	.750
.7000	.750
.8000	.750
.1000	.900
.2000	.900
.4000	.900
.7000	.900
.8000	.900

129	558	7.765	1.198	1.529E-03	.0224	1.845ZE-03	.0270	2.058BE-03	.0302
130	556	2.963	.504	6.415E-04	.0094	7.736YE-04	.0113	8.623BE-04	.0126
131	552	.723	.135	1.705E-04	.0025	2.053YE-04	.0030	2.288BE-04	.0034
132	549	.538	.103	1.298E-04	.0019	1.562YE-04	.0023	1.739BE-04	.0025
133	544	.347	.061	7.542E-05	.0011	9.127YE-05	.0013	1.015ZE-04	.0015
143	556	10.526	2.137	2.719E-03	.0398	3.278ZE-03	.0480	3.654BE-03	.0535
145	552	2.552	.433	5.489E-04	.0080	6.612YE-04	.0097	7.306BE-04	.0108
146	544	.345	.060	7.556E-05	.0011	9.084YE-05	.0013	1.010ZE-04	.0015
158	553	9.044	1.388	1.760E-03	.0258	2.121YE-03	.0311	2.363BE-03	.0346
159	553	6.627	1.091	1.383E-03	.0203	1.666YE-03	.0244	1.856ZE-03	.0272
160	553	3.747	.616	7.815E-04	.0114	9.414ZE-04	.0138	1.049BE-03	.0154
161	547	1.163	.203	2.580E-04	.0037	3.079YE-04	.0045	3.427ZE-04	.0050
162	543	1.857	.253	3.169E-04	.0046	3.820YE-04	.0056	4.256ZE-04	.0062
179	558	29.540	5.357	6.840E-03	.1002	8.243YE-03	.1209	9.205BE-03	.1349
180	554	10.536	1.906	2.419E-03	.0354	2.915YE-03	.0427	3.249ZE-03	.0476
181	554	7.500	.946	1.201E-03	.0176	1.447YE-03	.0212	1.613BE-03	.0236
182	544	2.023	.362	4.291E-04	.0063	5.159BE-04	.0076	5.731YE-04	.0084

VERTICAL STABILIZER

A/C	Z/S
0	.100
.1000	.100
.4000	.100
.8000	.100
0	.250
.1000	.250
.4000	.250
.8000	.250
0	.500
.1000	.500
.4000	.500
.8000	.500
0	.750
.1000	.750
.4000	.750
.8000	.750

187	564	48.468	8.019	1.032E-02	.1311	1.249ME-02	.1827	1.392UE-02	.2039
188	565	7.151	1.245	1.567E-03	.0230	1.884ZE-03	.0276	2.097UE-03	.0307
189	562	1.739	.298	3.672E-04	.0054	4.412YE-04	.0065	4.907ZE-04	.0072
191	562	.700	.134	1.670E-04	.0024	2.006YE-04	.0029	2.231YE-04	.0033
192	564	34.045	7.531	9.679E-03	.1418	1.164ME-02	.1713	1.305GE-02	.1913
193	569	14.224	2.445	3.139E-03	.0460	3.774ZE-03	.0554	4.206BE-03	.0616
194	566	3.913	.662	8.326E-04	.0122	1.001SE-03	.0147	1.114GE-03	.0163
195	563	1.402	.252	3.157E-04	.0046	3.795IE-04	.0056	4.221JE-04	.0062
197	567	34.925	6.521	8.309E-03	.1217	1.002JE-02	.1468	1.117SE-02	.1637
198	569	3.913	.706	8.904E-04	.0130	1.071HE-03	.0157	1.193JE-03	.0175
200	566	1.931	.345	4.370E-04	.0064	5.253GE-04	.0077	5.844SE-04	.0086
201	579	79.160	15.348	2.018E-02	.2956	2.428ME-02	.3584	2.741SE-02	.4016
202	567	41.107	4.741	6.044E-03	.0885	7.291JE-03	.1069	8.130GE-03	.1191
203	568	6.033	.692	8.723E-04	.0128	1.049JE-03	.0154	1.168SE-03	.0171
204	562	3.724	.446	5.586E-04	.0082	6.712BE-04	.0098	7.465YE-04	.0109

GROUP
113

366071

366072

5/29/71

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL H
VT1167

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREBEND	ROLL-MODEL	YAW
50	7	AAH-0A0	8.00	854.1	1344	9.43	12.57	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	U-INF (FT/SEC)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FH (M= .009FT)	SIPH (M= .009FT)	SWITCH POSITION
97.4	.0HH	3.93H	.HAA	7.8726-05	7.0041E-08	3.79E 06	8.835E-02	2.93I1E-02	1

TC NO	TM	D(M)I	U-D(I	M(TO)	M(TO)/MMEF	P(.9TO)	M(.9TO)/MMEF	M(.85TO)	M(.85TO)/MMEF	FUSELAGE A/L	FUSELAGE Y/YMAX
1	631	229.244	42.458	5.459E-02	.6718	7.3446E-02	1.0745	8.3106E-02	1.2159	0	0
2	575	99.918	18.612	2.141E-02	.3161	2.6101E-02	.3830	2.9282E-02	.4284	.0100	-0
3	558	46.635	7.741	9.869E-03	.1444	1.1906E-02	.1742	1.3276E-02	.1942	.0100	-.441
4	550	23.743	3.937	4.548E-03	.0670	5.5129E-03	.0807	6.1381E-03	.0898	.0100	-1.000
5	547	13.554	2.153	2.702E-03	.0395	3.2509E-03	.0476	3.6174E-03	.0529	.0100	0
6	546	69.919	11.447	1.472E-02	.2154	1.7787E-02	.2604	1.9874E-02	.2908	.0200	-0
7	560	57.908	10.512	1.342E-02	.1963	1.6192E-02	.2369	1.8062E-02	.2643	.0300	-0
8	558	32.259	5.678	7.223E-03	.1057	8.7125E-03	.1275	9.7141E-03	.1421	.0300	-.303
9	548	22.101	3.504	4.405E-03	.0644	5.3006E-03	.0776	5.9004E-03	.0863	.0300	-1.000
10	546	9.521	1.719	2.150E-03	.0315	2.5856E-03	.0378	2.8770E-03	.0421	.0300	0
11	560	38.165	7.558	9.443E-03	.1411	1.1439E-02	.1703	1.2748E-02	.1899	.0400	-0
12	554	25.855	5.110	6.467E-03	.0966	7.7917E-03	.1160	8.6811E-03	.1270	.0500	-0
13	553	28.326	5.600	7.079E-03	.1036	8.5282E-03	.1268	9.5004E-03	.1390	.0500	-.310
14	551	18.855	3.811	4.176E-03	.0611	5.0289E-03	.0736	5.6006E-03	.0819	.0500	-1.000
15	547	7.947	1.660	2.041E-03	.0305	2.5032E-03	.0366	2.7856E-03	.0408	.0500	0
16	552	17.641	2.223	2.809E-03	.0411	3.3832E-03	.0495	3.7687E-03	.0551	.0800	-0
17	556	25.317	4.307	5.442E-03	.0799	6.5944E-03	.0963	7.3394E-03	.1074	.0800	-.300
18	552	19.571	3.324	4.198E-03	.0614	5.0566E-03	.0740	5.6325E-03	.0824	.0800	-1.000
19	550	8.467	1.579	1.908E-03	.0291	2.3913E-03	.0350	2.6648E-03	.0390	.1000	-0
20	553	11.687	.897	1.134E-03	.0106	1.3857E-03	.0200	1.5214E-03	.0223	.1000	-.383
21	554	12.826	2.077	2.628E-03	.0385	3.1647E-03	.0463	3.5283E-03	.0516	.1000	-.817
22	553	13.481	2.634	3.075E-03	.0450	3.7046E-03	.0542	4.1266E-03	.0604	.1000	-1.000
23	548	3.348	.604	7.585E-04	.0111	9.1249E-04	.0134	1.0156E-03	.0149	.1000	.783
24	548	2.848	.543	6.822E-04	.0100	8.2078E-04	.0120	9.1395E-04	.0134	.1000	0
25	553	14.303	2.901	3.670E-03	.0537	4.4215E-03	.0647	4.9260E-03	.0721	.1500	-.893
26	549	12.910	2.542	3.198E-03	.0468	3.8492E-03	.0563	4.2853E-03	.0627	.1500	-1.000
27	545	2.547	.487	6.091E-04	.0089	7.3235E-04	.0107	8.1476E-04	.0119	.1500	.664
28	545	1.380	.218	2.745E-04	.0040	3.2988E-04	.0048	3.6588E-04	.0054	.1500	0
29	547	9.384	.968	1.214E-03	.0178	1.4600E-03	.0214	1.6247E-03	.0238	.2000	-0
30	548	8.405	1.654	2.078E-03	.0304	2.4994E-03	.0366	2.7826E-03	.0407	.2000	-.278
31	551	15.165	3.151	3.976E-03	.0582	4.7880E-03	.0701	5.3324E-03	.0780	.2000	-.466
32	551	14.940	2.945	3.714E-03	.0543	4.4721E-03	.0654	4.9803E-03	.0729	.2000	-.792
33	549	10.843	1.956	2.468E-03	.0360	2.9596E-03	.0433	3.2945E-03	.0482	.2000	-1.000
34	546	3.199	.611	7.662E-04	.0112	9.2141E-04	.0135	1.0252E-03	.0150	.2000	.888
35	549	8.378	1.512	1.901E-03	.0278	2.2878E-03	.0335	2.5468E-03	.0373	.2000	0
36	550	11.293	1.854	2.336E-03	.0342	2.8121E-03	.0411	3.1313E-03	.0458	.2100	0
37	542	31.955	5.807	7.428E-03	.1087	8.9708E-03	.1312	1.0010E-02	.1464	.2200	0
38	579	83.524	13.450	1.758E-02	.2572	2.1328E-02	.3120	2.3872E-02	.3493	.2300	0
39	542	18.471	3.042	4.000E-03	.0585	4.8139E-03	.0811	5.1705E-03	.0903	.2400	.488
40	552	14.359	2.277	2.875E-03	.0421	3.4628E-03	.0507	3.8569E-03	.0564	.2500	0
41	551	8.323	1.648	2.125E-03	.0311	2.5541E-03	.0374	2.8496E-03	.0417	.2700	.465
42	550	6.946	1.408	1.771E-03	.0259	2.1322E-03	.0312	2.3741E-03	.0347	.2700	.465
43	549	4.234	.846	1.055E-04	.0119	9.4139E-04	.0144	1.0425E-03	.0160	.2700	0
44	552	3.977	.697	8.797E-04	.0129	1.0595E-03	.0155	1.1800E-03	.0173	.3000	-0
45	554	11.151	2.079	2.634E-03	.0385	3.1739E-03	.0464	3.5367E-03	.0517	.3000	-.312
46	555	14.440	3.045	3.876E-03	.0713	5.8774E-03	.0860	6.5503E-03	.0958	.3000	-.504
47	556	20.218	2.997	3.805E-03	.0557	4.5872E-03	.0671	5.1131E-03	.0748	.3000	-.857
48	555	12.895	2.192	2.777E-03	.0406	3.3474E-03	.0493	3.7300E-03	.0546	.3000	-1.000
49	550	6.530	1.247	1.621E-03	.0237	1.9520E-03	.0286	2.1756E-03	.0318	.3000	.983
50	550	4.723	.733	9.234E-04	.0135	1.1116E-03	.0163	1.2376E-03	.0181	.3000	.853
51	551	7.401	1.540	1.963E-03	.0286	2.3397E-03	.0342	2.6057E-03	.0381	.3000	.433
52	551	9.541	1.152	1.453E-03	.0213	1.7491E-03	.0256	1.9477E-03	.0285	.3000	.361
53	548	1.458	.246	3.048E-04	.0045	3.7127E-04	.0054	4.1324E-04	.0060	.3000	0
54	553	3.186	.629	7.954E-04	.0116	9.5835E-04	.0140	1.0677E-03	.0156	.4000	-0
55	556	18.156	3.688	4.554E-03	.0806	5.4911E-03	.0803	6.1205E-03	.0895	.4000	-.321
56	556	19.949	3.941	5.001E-03	.0732	6.0290E-03	.0882	6.7197E-03	.0983	.4000	-.526
57	560	31.157	5.485	7.000E-03	.1024	8.4493E-03	.1236	9.4250E-03	.1379	.4000	-.951
58	556	19.807	3.588	4.555E-03	.0666	5.4919E-03	.0803	6.1215E-03	.0896	.4000	-1.000
59	554	11.478	2.202	2.787E-03	.0408	3.3579E-03	.0491	3.7410E-03	.0547	.4000	1.000
60	552	8.249	1.491	1.882E-03	.0275	2.2684E-03	.0332	2.5262E-03	.0369	.4000	.906
61	550	4.170	.743	9.484E-04	.0139	1.1436E-03	.0167	1.2711E-03	.0186	.4000	.750
62	550	3.214	.810	9.428E-04	.0094	7.7379E-04	.0113	8.6161E-04	.0126	.4000	0
63	555	15.140	2.741	3.473E-03	.0508	4.1854E-03	.0612	4.6840E-03	.0682	.4500	-1.000
64	555	11.447	2.323	2.944E-03	.0431	3.5486E-03	.0519	3.9565E-03	.0579	.4500	1.000
65	551	8.089	1.502	1.893E-03	.0277	2.2796E-03	.0334	2.5385E-03	.0371	.4500	.990
66	557	6.989	1.309	1.658E-03	.0243	1.9990E-03	.0292	2.2284E-03	.0326	.5000	-0
67	559	17.719	3.409	4.343E-03	.0635	5.2408E-03	.0767	5.8445E-03	.0855	.5000	-.277
68	558	19.101	3.778	4.807E-03	.0703	5.7981E-03	.0848	6.4647E-03	.0946	.5000	-.553
69	560	21.009	3.928	5.008E-03	.0733	6.0442E-03	.0884	6.7412E-03	.0986	.5000	-.830
70	562	27.420	5.245	6.763E-03	.0989	8.1676E-03	.1195	9.1141E-03	.1333	.5000	-1.000
72	556	11.367	2.314	2.935E-03	.0429	3.5387E-03	.0518	3.9439E-03	.0577	.5000	1.000
73	552	5.837	1.087	1.372E-03	.0201	1.6521E-03	.0242	1.8401E-03	.0269	.5000	.888
74	551	3.585	.648	8.162E-04	.0119	9.8268E-04	.0144	1.0943E-03	.0160	.5000	.640
75	553	8.173	1.478	1.870E-03	.0274	2.2534E-03	.0330	2.5105E-03	.0367	.5000	0
76	562	10.239	1.691	2.143E-03	.0316	2.5117E-03	.0382	2.9140E-03	.0426	.5500	-0
77	554	4.315	.848	1.084E-03	.0127	1.0464E-03	.0153	1.1659E-03	.0171	.5500	-1.000
78	556	7.611	1.170	1.485E-03	.0217	1.7902E-03	.0262	1.9954E-03	.0292	.5500	1.000
79	552	4.227	.787	9.963E-04	.0145	1.1976E-03	.0175	1.3334E-03	.0195	.5500	.935
80	561	12.875	2.440	3.167E-03	.0463	3.8231E-03	.0559	4.2650E-03	.0624	.6000	-0
81	562	16.089	3.367	4.308E-03	.0630	5.2025E-03	.0761	5.8053E-03	.0849	.6000	-.249
83	563	24.257	4.811	6.162E-03	.0901	7.4429E-03	.1089	8.3064E-03	.1215	.6000	-.748
84	562	1.541	.311	3.875E-04	.0057	4.6594E-04	.0068	5.1766E-04	.0076	.6000	-1.000
85	555	3.222	.643	7.991E-04	.0118	9.9087E-04	.0110	9.9278E-04	.0145	.6000	1.000
86	552	2.772	.531	6.711E-04	.0098	8.0832E-04	.0118	9.0035E-04	.0132	.6000	.907
87	552	5.168	.906	1.145E-03	.0167	1.3790E-03	.0202	1.5361E-03	.0225	.6000	0
88	564	14.088	2.596	3.298F-03	.0481	3.9705E-03	.0581	4.4320E-03	.0648	.6500	-0
89	562	14.235	2.668	3.411E-03	.0499	4.1192E-03	.0603	4.5965E-03	.0672	.7000	-0
90	562	15.540	3.041	3.941E-03	.0577	4.7549E-03	.0696	5.3112E-03	.0777	.7000	-.235
91	562	15.381	3.049	3.900E-03	.0571	4.7103E-03	.0689	5.2559E-03	.0769	.7000	-.469
92	563	17.817	3.337	4.274E-03	.0625	5.1629E-03	.0755	5.7618E-03	.0843	.7000	-.704
93	563	18.065	3.688	4.722E-03	.0691	5.7028E-03	.0834	6.3641E-03	.0931	.7000	-.848
94	557	2.229	.490	6.218E-04	.0091	7.4979E-04	.0110	8.3581E-04	.0122	.7000	1.000
95	562	2.318	.419	5.249E-04	.0077	6.3092E-04	.0093	7.0939E-04	.0104	.7000	.908
96	561	4.574	.826	1.043E-03	.0153	1.2555E-03	.0184	1.3983E-03	.0205	.7500	0
97	562	13.579	2.562	3.250E-03	.0475	3.9237E-03	.0574	4.3778E-03	.0640	.7500	-0
98	560	14.204	2.901	3.692E-03	.0467	3.8526E-03	.0564	4.2975E-03	.0629	.8000	-0

366075

GROUP 114

AEDC(ARO,INC.) ARNOLD AFS, TENNESSEE
VON KARMAN GAS DYNAMICS FACILITY
50 INCH HYPERSONIC TUNNEL B
VT1162

RUN	CONFIG	MODEL	MACH NO	PO PSIA	TO DEG R	ALPHA-MODEL	ALPHA-SECTOR	ALPHA-PREMEND	ROLL-MODEL	YAW
51	7	NAR-UWD	8.00	857.9	1346	29.82	-7.62	-22.00	180.00	.0

T-INF (DEG R)	P-INF (PSIA)	Q-INF (PSIA)	V-INF (FT/SEC)	RHO-INF (SLUGS/FT3)	MU-INF (LB-SEC/FT2)	RE/FT (FT-1)	MREF-FR (M= .009FT)	SIPR (M= .009FT)	SWITCH POSITION
97.5	.088	3.937	3471	7.562E-05	7.850E-08	3.73E 06	6.836E-02	2.933E-02	2

TC NO	IW	DTHET	Q-DOT	HC(TO)	HC(TO)/HREF	HC,STO)	HC,STO)/HREF	HC,ASTO)	HC,ASTO)/HREF
									FUSELAGE
									X/L Y/YMAX
99	570	12.910	2.498	3.220E-03	.0471	3.8942E-03	.0570	4.3530E-03	.0637	.8000 -.223
100	569	11.737	2.269	2.921E-03	.0427	3.5327E-03	.0517	3.9461E-03	.0577	.8000 -.446
101	572	11.628	2.444	3.158E-03	.0462	3.8225E-03	.0559	4.2720E-03	.0625	.8000 -.669
102	574	11.792	2.482	3.218E-03	.0471	3.8982E-03	.0570	4.3587E-03	.0638	.8000 -.806
103	571	11.017	2.193	2.830E-03	.0414	3.4262E-03	.0501	3.8261E-03	.0560	.8500 -0
104	571	11.497	2.098	2.707E-03	.0396	3.2757E-03	.0479	3.6601E-03	.0535	.9000 -0
105	567	10.418	2.070	2.660E-03	.0389	3.2159E-03	.0470	3.5912E-03	.0525	.9000 -.226
106	562	9.964	1.975	2.522E-03	.0369	3.0447E-03	.0445	3.3970E-03	.0497	.9000 -.452
107	568	9.802	1.786	2.296E-03	.0336	2.7742E-03	.0406	3.1004E-03	.0454	.9000 -.678
108	565	8.902	1.669	2.138E-03	.0313	2.5834E-03	.0378	2.8838E-03	.0422	.9000 -.817
109	565	.523	.106	1.319E-04	.0019	1.5855E-04	.0023	1.7636E-04	.0026	.9000 1.000
110	568	1.574	.294	3.557E-04	.0052	4.2780E-04	.0063	4.7607E-04	.0070	.9000 .884
111	567	.792	.130	1.624E-04	.0024	1.9536E-04	.0029	2.1738E-04	.0032	.9000 .810
112	571	10.629	2.057	2.654E-03	.0388	3.2170E-03	.0470	3.5890E-03	.0525	.9500 -0
113	570	13.548	2.621	3.379E-03	.0494	4.0977E-03	.0598	4.5684E-03	.0668	.9900 -0
114	573	13.187	2.628	3.401E-03	.0498	4.1183E-03	.0602	4.6037E-03	.0673	.9900 -.253
115	572	10.988	2.189	2.828E-03	.0414	3.4230E-03	.0501	3.8255E-03	.0560	.9900 -.507
116	566	8.301	1.649	2.117E-03	.0310	2.5590E-03	.0374	2.8572E-03	.0418	.9900 -.660
117	563	5.209	.947	1.210E-03	.0177	1.4615E-03	.0214	1.6308E-03	.0239	.9900 -.793
118	567	1.554	.314	3.930E-04	.0057	4.7267E-04	.0069	5.2596E-04	.0077	.9900 .780
119	565	1.174	.139	1.681E-04	.0025	2.0206E-04	.0030	2.2475E-04	.0033	.9900 .305
									LOWER WING SURFACE
									X/C Y/S
121	591	39.181	5.900	7.819E-03	.1144	9.5161E-03	.1392	1.0674E-02	.1562	0 .050
122	588	41.712	7.277	9.840E-03	.1442	1.2059E-02	.1766	1.3572E-02	.1985	0 .100
124	580	18.633	3.415	4.458E-03	.0652	5.4084E-03	.0791	6.0533E-03	.0886	.2000 .100
126	566	7.026	1.292	1.541E-03	.0226	1.8611E-03	.0273	2.0800E-03	.0304	.6000 .100
127	562	4.367	1.520	1.939E-03	.0284	2.3406E-03	.0342	2.6112E-03	.0382	.7000 .100
128	599	60.888	7.131	9.550E-03	.1397	1.1449E-02	.1704	1.3048E-02	.1915	.9000 .100
134	608	55.182	11.490	1.557E-02	.2278	1.9041E-02	.2785	2.1430E-02	.3135	0 .150
135	603	54.716	10.142	1.368E-02	.1999	1.6687E-02	.2441	1.8764E-02	.2745	0 .250
136	597	37.816	6.990	9.341E-03	.1366	1.1388E-02	.1666	1.2790E-02	.1871	.1000 .250
137	585	23.471	4.053	5.333E-03	.0780	6.4798E-03	.0948	7.2607E-03	.1062	.2000 .250
138	575	16.014	3.017	3.916E-03	.0573	4.7447E-03	.0694	5.3060E-03	.0776	.4000 .250
140	568	12.365	2.191	2.819E-03	.0412	3.4097E-03	.0499	3.8084E-03	.0557	.6000 .250
142	607	79.401	13.402	1.814F-02	.2654	2.2186E-02	.3246	2.4966E-02	.3652	.9000 .250
147	606	46.457	8.882	1.200F-02	.1756	1.4670E-02	.2146	1.6504E-02	.2414	0 .450
148	598	36.986	6.841	9.157E-03	.1340	1.1168E-02	.1634	1.2546E-02	.1835	.1000 .450
149	608	50.567	9.682	1.312F-02	.1920	1.6050E-02	.2348	1.8064E-02	.2643	0 .500
150	596	38.225	7.706	1.028F-02	.1504	1.2531E-02	.1833	1.4071E-02	.2058	.1000 .500
151	581	25.661	5.141	6.727F-03	.0984	8.1648E-03	.1194	9.1415E-03	.1337	.2000 .500
152	574	19.500	3.456	4.478F-03	.0655	5.4233E-03	.0793	6.0634E-03	.0887	.4000 .500
154	558	14.727	2.670	3.390F-03	.0496	4.0887E-03	.0598	4.5583E-03	.0667	.6000 .500
155	576	30.655	4.929	6.406E-03	.0937	7.7635E-03	.1136	8.6836E-03	.1270	.8000 .500
157	582	45.511	8.353	1.094E-02	.1601	1.3283E-02	.1943	1.4874E-02	.2176	.9000 .500
163	598	49.699	9.467	1.266E-02	.1852	1.5436E-02	.2258	1.7338E-02	.2536	0 .550
164	597	42.683	8.127	1.085E-02	.1588	1.3230E-02	.1935	1.4858E-02	.2174	.1000 .550
165	604	47.568	9.086	1.225F-02	.1792	1.4961E-02	.2189	1.6825E-02	.2461	0 .600
166	600	45.063	8.339	1.118F-02	.1635	1.3640E-02	.1995	1.5327E-02	.2242	.1000 .600
167	598	49.152	9.087	1.215F-02	.1777	1.4815E-02	.2167	1.6640E-02	.2434	0 .650
168	593	41.391	8.330	1.107F-02	.1620	1.3483E-02	.1972	1.5131E-02	.2213	.1000 .650
169	593	47.877	8.834	1.175F-02	.1718	1.4306E-02	.2093	1.6056E-02	.2349	0 .700
170	566	26.422	4.809	6.166E-03	.0902	7.4510E-03	.1090	8.3180E-03	.1217	.1000 .700
171	604	52.396	9.716	1.311F-02	.1917	1.6013E-02	.2343	1.8010E-02	.2635	0 .750
172	598	45.624	8.183	1.095E-02	.1602	1.3359E-02	.1954	1.5008E-02	.2195	.1000 .750
173	578	31.028	5.855	7.629F-03	.1116	9.2505E-03	.1353	1.0351E-02	.1514	.2000 .750
175	559	22.117	4.498	5.715F-03	.0836	6.8935E-03	.1008	7.6861E-03	.1124	.4000 .750
176	559	16.248	3.127	3.977E-03	.0582	4.7986E-03	.0702	5.3511E-03	.0783	.7000 .750
178	567	20.247	3.688	4.736E-03	.0693	5.7251E-03	.0838	6.3928E-03	.0935	.8000 .750
183	564	22.328	3.200	4.096F-03	.0599	4.9485E-03	.0724	5.5210E-03	.0808	0 .900
184	591	19.996	3.613	4.550F-03	.0666	5.4777E-03	.0801	6.0998E-03	.0892	.2000 .900
185	577	29.280	5.360	6.976F-03	.1020	8.4535E-03	.1237	9.4570E-03	.1383	.6000 .900
194	578	36.075	6.606	8.605F-03	.1259	1.0434E-02	.1526	1.1674E-02	.1708	.8000 .900
									UPPER WING SURFACE
									X/C Y/S
129	549	1.632	.250	3.138E-04	.0046	3.7744E-04	.0055	4.2027E-04	.0061	.1000 .100
130	549	.461	.083	1.045E-04	.0015	1.2574E-04	.0018	1.3996E-04	.0020	.2000 .100
131	547	.420	.078	9.766E-05	.0014	1.1744E-04	.0017	1.3067E-04	.0019	.4000 .100
132	541	.119	.023	2.816E-05	.0004	3.3811E-05	.0005	3.7585E-05	.0005	.7000 .100
133	532	.694	.120	1.478E-04	.0022	1.7782E-04	.0026	1.9847E-04	.0029	.9000 .100
143	548	2.574	.520	6.522E-04	.0095	7.8445E-04	.0115	8.7298E-04	.0128	.1000 .250
145	543	.457	.077	9.628E-05	.0014	1.1548E-04	.0017	1.2865E-04	.0019	.4000 .250
146	534	1.311	.228	2.805E-04	.0041	3.3674E-04	.0049	3.7335E-04	.0055	.9000 .250
158	544	2.671	.498	6.086E-04	.0074	6.1118E-04	.0089	6.7971E-04	.0099	.1000 .500
159	543	1.632	.267	3.325E-04	.0049	3.9948E-04	.0058	4.4421E-04	.0065	.2000 .500
160	540	.672	.110	1.363E-04	.0020	1.6367E-04	.0024	1.8192E-04	.0027	.4000 .500
161	532	.293	.051	6.253E-05	.0009	7.4972E-05	.0011	8.3164E-05	.0012	.8000 .500
162	533	2.471	.335	4.125E-04	.0060	4.9440E-04	.0072	5.4886E-04	.0080	.9000 .500
179	539	4.327	.777	9.634E-04	.0141	1.1564E-03	.0169	1.2851E-03	.0188	.1000 .750
180	535	2.034	.364	4.497E-04	.0066	5.3929E-04	.0079	5.9893E-04	.0088	.2000 .750
181	530	.725	.090	1.107E-04	.0016	1.3262E-04	.0019	1.4717E-04	.0022	.4000 .750
182	530	.475	.090	9.770E-05	.0014	1.1700E-04	.0017	1.2982E-04	.0019	.8000 .750
									VERTICAL STABILIZER
									X/C Z/S
187	550	4.554	.768	9.394E-04	.0137	1.1305E-03	.0165	1.2586E-03	.0184	0 .100
188	542	1.811	.316	3.932E-04	.0058	4.7235E-04	.0069	5.2520E-04	.0077	.1000 .100
189	540	.272	.046	5.699E-05	.0008	6.8411E-05	.0010	7.6031E-05	.0011	.4000 .100
191	540	.555	.106	1.313E-04	.0019	1.5765E-04	.0023	1.7522E-04	.0026	.8000 .100
192	548	3.841	.735	9.209E-04	.0135	1.1077E-03	.0162	1.2328E-03	.0180	0 .250
193	562	2.391	.417	5.191E-04	.0076	6.2349E-04	.0091	6.9323E-04	.0101	.1000 .250
194	560	.454	.077	9.518E-05	.0014	1.1428E-04	.0017	1.2702E-04	.0019	.4000 .250
195	539	.666	.119	1.480E-04	.0022	1.7767E-04	.0026	1.9762E-04	.0029	.8000 .250
197	543	4.710	.873	1.088F-03	.0159	1.3071E-03	.0191	1.4535E-03	.0213	.1000 .500
198	540	.827	.149	1.844F-04	.0027	2.2140E-04	.0032	2.4606E-04	.0036	.4000 .500
200	536	.879	.156	1.932F-04	.0028	2.3169E-04	.0034	2.5734E-04	.0038	.8000 .500
201	552	10.433	2.008	2.518F-03	.0368	3.0322E-03	.0444	3.3767E-03	.0494	0 .750
202	544	8.998	1.031	1.286E-03	.0188	1.5458E-03	.0226	1.7193E-03	.0252	.1000 .750
203	536	1.575	.180	2.220F-04	.0032	2.6624E-04	.0039	2.9573E-04	.0043	.4000 .750
204	533	1.797	.214	2.638E-04	.0039	3.1610E-04	.0046	3.5091E-04	.0051	.8000 .750

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